



Wild News

The Bi-monthly Newsletter of the Prince William Wildflower Society
A Chapter of the Virginia Native Plant Society

Number 2019 - 06

November - December 2019

Thursday, November 7 Meeting

7:30 pm, Bethel Evangelical Lutheran Church
8712 Plantation Lane, Manassas

**Dr. Andrea Weeks will present, "Digitized Herbaria
Open a New Chapter for Native Plant Research and
Education for Virginia"**

Associate Professor in George Mason's Department of Biology, Dr. Weeks will give an update on how digitizing Virginia's herbaria has lead to new discoveries and collaborations that are pushing forward our knowledge of the Flora of Virginia.

Dr. Weeks' research focuses on understanding the systematics, historical biogeography, and evolution of flowering plants, particularly those within the frankincense and myrrh family, Burseraceae.



She is interested in testing hypotheses regarding how plant lineages are related, how their extant geographic distributions became established over time, and how their morphological and physiological features evolved. Her studies rely on both molecular data gathered in the laboratory and morphological observations gathered in the field and the herbarium. She also conducts molecular phylogeographic studies of single species to inform taxonomic decisions, establish conservation priorities for vulnerable taxa, and investigate the history of domestication for cultivated species. Dr. Weeks is also director of the Ted R. Bradley Herbarium at George Mason

University and is engaged in making this valuable resource of information about the Virginia flora available to the public via the Internet.

From the President:

What a dry late summer and fall we have had! The leaves on my poor dogwoods just shriveled up instead of turning their usual burgundy red. At least they produced their nutritious red berries for our migrating songbirds. Many of my native perennials finished blooming earlier than usual and withered; I hope that most will return next year.



I was pleased that PWWs had a contingent of members at the recent VNPS annual meeting in Front Royal. Joyce and Tom Andrew, Deanna and Jack High, Marion Lobstein, and Martha Slover joined Harry and me there. Marion was recognized as one of only two charter members present, with Jocelyn Sladen of the Piedmont Chapter being the other. At the business meeting we noted the passing of Mary Pockman, the second VNPS president, who continued to support us despite retiring to New Mexico. Just this month, our state founder and first president, Mary Painter, passed away at the age of only 69. Both blazed the trail to create the society we have today and we are indebted to them for their service and vision.

Once again PWWs participated at the environmental expo associated with Prince William Recycles Day held at the landfill on October 12. What a fun event attended by hundreds of families! In addition to our regular selection of brochures and printed material, we had a table full of plant specimens and seeds to engage visitors. People were most surprised by the huge bean-like seedpod of Trumpetvine, *Campsis radicans*. And our hand stamps and bowl of nonnative M&Ms proved very popular! Many thanks to Carol Thompson and Diane Liga for staffing a shift with Harry and me.

(From the President, continued) Our pollinator planting at the I-95 northbound rest area in Dale City had a rough season with the late drought, but the Virginia Department of Transportation is purchasing more native plants. We need volunteers for a Planting Party to plant plugs (small-sized perennials) on Friday, November 8 beginning at 9 a.m. The weather will be cooler, yet the soil should be warm enough for the plugs to spread their roots before the ground freezes.

Many of you may recall the controversy about the "Tough Mudder" event at Silver Lake Park this past June. Many residents were concerned that major events such as "Tough Mudder" could damage the park's natural resources. In an effort to enhance the park and build good will with the citizens, park staff is purchasing trees for planting this fall. Volunteers are needed for this planting on Saturday, November 2 from 9 a.m. until noon. Register to help at <https://www.eventbrite.com/e/tree-planting-at-silver-lake-park-tickets-77223456437>.

This month's program is a little different than our usual fare. Did you know that most universities have a herbarium, a collection of pressed and preserved plant specimens, but that some are being closed and consolidated? Tight budgets and competition for space put pressure on these institutions to direct resources to facilities such as labs. Our speaker, Dr. Andrea Weeks, is the curator for the Bradley Herbarium at George Mason University, and she will explain the importance of herbaria, digitalization of specimens, and how they are used for scientific research.



This meeting will be the last for **Brenda Hallam** as our refreshments coordinator. She has faithfully ensured that we have food and drink at our meetings, and we thank her for her diligent service. This leaves an opportunity for someone else to fill this role. We would love to see one of our newer members become more involved with our chapter, and this is a way to learn more about our inner workings. If you are interested in volunteering or have questions, please contact me at nvehrs1@yahoo.com.

~ Nancy

Patriot High School's Outdoor Classroom

Many of you might remember that PWWS member Melinda Landry made a plea for native plants for the outdoor classroom at Patriot High School where she teaches science. She has accomplished yeoman's work in combating invasive plants and taming the poison ivy so that students can safely enter the site. We provided her with some native plants that she and some of her students planted. Brigitte Hartke and I attended her ribbon-cutting event on

September 25 that included Dr. Steve Walts, School Superintendent. The event had several learning stations along the mulched path in a fence that circles the area with an old farm pond on the interior. Melinda even baked persimmon cookies from the ample fruits found there, and students were also invited to taste some of the raw (and washed) fruits. In October Marion Lobstein, Janis Stone, and I met there to identify and inventory all of the plants in the outdoor classroom. For me, the most charming native growing there is a monkeyflower, *Mimulus alatus*, which likes the moisture of the pond's edge. Alas the pond had reverted to a big mudhole in October, but recent rains should replenish its water.



Photo: N. Vehrs, Monkey flower

Prince William Wildflower Society

Wild News is the bi-monthly newsletter of the Prince William Wildflower Society, P.O. Box 83, Manassas, Virginia 20108, vnps.org/princewilliamwildflowersociety/ Nancy Vehrs, President; Brigitte Hartke, Editor. Original Material in *Wild News* may be reprinted if credit is given to PWWS, to *Wild News* and to the author of the material, if named.

Next submission deadline:
December 12, 2019

**Prince William Wildflower Society
Annual Membership Meeting Minutes
Thursday, September 5, 2019, 7:30 p.m.
Bethel Lutheran Evangelical Church, Manassas**

President Nancy Vehrs called the meeting to order at 7:35 p.m.

Announcements: Refreshments were donated by the following members: Brenda Hallam, Libby Pemberton, Jannell Bryant, Nancy Vehrs, Judy Gallagher, Andrea Kinder. Thank you all.

New members were introduced and welcomed: Sandy Jeter, Bonita Schmidt, Missi Lackas. Nancy V. reminded all that new members receive a free copy of *Plant NOVA Natives* at the first PWWS meeting they attend.

Treasurer's Report: Treasurer Valerie Kenyon-Gaffney reported that we have \$4,415.65 in our checking account, and we have \$11,924.00 in savings.

Annual Meeting: Nancy V. introduced the other PWWS Executive Board members who will be serving another year before elections in 2020 - Treasurer Valerie Kenyon-Gaffney and Secretary Karen Waltman. Vice-President William Carromero resigned in August because of commitments for work. We thank him for his contributions and work in acquiring great programs.

Copies of the Proposed 2020 Budget were available for review. Members were sent the Proposed Budget in emails, and copies were mailed to those without email addresses. An invitation to the annual meeting was also included for both groups at least 30 days before the Annual Meeting, as required by our bylaws. Janice Beaverson moved to accept the Proposed Budget, and Nancy Herwig seconded the motion. Motion passed.

More Announcements: Nancy announced the February 23, 2020, date for the annual Author's Event Program at Manassas Park Community Center. Dr. Doug Tallamy will be the speaker and we will be selling his new book.

Nancy thanked Marion Lobstein for her interesting articles for our newsletter, *Wild News*.

Marion announced that charter member Helen Rawls was turning 100 years old on September 14, and Marion planned to attend the small birthday gathering at Helen's nursing home.

Program: Nancy introduced the speaker, Alonso Abugattas, well-known by many present for his "Capital Naturalist" blog. (<http://capitalnaturalist.blogspot.com/>) His program, "Wildflower Folklore and Ethnobotany," was a

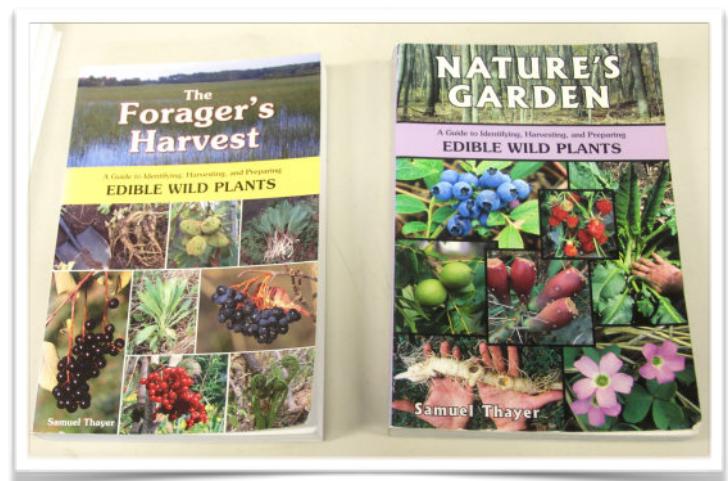
fascinating presentation of how past cultures have used native plants for food, tools, medicine, and many other uses. For example, dogbane (*Apocynum cannabinum*) was used for strong ropes and even to fill the insoles of worn-out shoes during the Civil War. Milkweeds can also be used for cordage, but its fibers are not as strong as dogbane's. Also during the Civil War the Union blocked supplies to the Confederates, and the butternut tree's (*Juglans cinerea*) brown nuts were used as a dye for Confederate uniforms. If you weren't there, you missed a fun and interesting program, and very different look at native plants! Thank you, Alonso!

Door prizes. Mike Larson, owner of Wild Birds Unlimited in Gainesville donated two gift certificates from his store. The gift certificates and a variety of other door prizes went home with the following: Val Morgan, Marlies Smith, Harry Glasgow, Jennifer Graham, Jennifer Coates, Odette Malehorn, Karen Waltman, Missi Lackas.

In Attendance: Tom Ligon, Dee Brown, Glen Macdonald, Claudia Thompson-Deahl, Nancy Herwig, Val Morgan, Jennifer Coates, Theresa Defluri, Jeanne Endrikat, Melinda Landry, Janine Lawton, Sharon Figueroa, Annette Doktor, Carol De Spirito, Ron De Spirito, Charles Grymes, Mike Larson, Jannell Bryant, Andrea Kinder, Carol Thompson, Cathy Hindman, Marlies Smith, Brigitte Hartke, Karen Miliham, Nancy Arrington, Muriel Devine, David Singman, Barbara Deegan, Missi Lackas, Jennifer Graham, Nick Melog, Jocelyn Leu, Janis Stone, Sandy Jeter, Bonita Schmidt, Odette Malehorn, Lois Montgomery, Harry Glasgow, Brenda Hallam, Janice Beaverson, Julie Sarr, Valerie Kenyon Gaffney, Linda Mallery, Libby Pemberton, Karen Waltman, Judy Gallagher, Nancy Vehrs, Alonso Abugattas-speaker. (48!)



Karen Waltman, Secretary



Events 2019 - 2020

November

Saturday, November 2, 9 a.m. - noon — Tree Planting at Silver Lake Park. Register in advance (<https://treeplantingsilverlake.eventbrite.com>)

Saturday, November 2, 9:30 a.m. - 1 p.m. — Plant NOVA Natives Symposium: HOAs and Condo Association--Sustainable Solutions to Landscaping Headaches. Northern Virginia Community College, Annandale Campus. 8333 Little River Turnpike. Registration required. [Symposiums for HOA and Condo Assoc's | pnnjan18v1](#) Or call 703-244-9174

Thursday, November 7, 10 am - noon — Hike with a Naturalist at Bull Run Mountains Conservancy, 17405 Beverley Mill Drive, Broad Run, VA. On the first Thursday of every month, join a professional naturalist and discover the flora and fauna of the local region. Free program and all are welcome. Meet at the Mountain House.

Friday, November 8, 9 a.m. — Planting Party at I-95 Northbound Rest Area at Dale City. Many volunteers are needed to plant plugs; please come to do this important work before putting the flower beds to rest for the winter!

Saturday, November 9, 1 - 2 pm — Class given by bee expert Sam Droege — *Bringing Back Wild Bees, Wild Flowers and Wildlife to Local Backyards*. Manassas Park Community Center 99 Adams St., Manassas. To register, call the VA Cooperative Extension Help Desk, 703-792-7747

Sunday, November 17, 1 pm — VNPS Potowmack Chapter Annual Meeting and Program, at Green Springs Gardens, 4603 Green Spring Road, Alexandria. Speaker Dr. Peter Mecca will describe some of the science-learning opportunities available to student at George Mason H.S., including invasive plant removal, urban agriculture and alternative gardening methods.

Sunday Morning, November 24, 8 am — Bird and Nature Walk at Merrimac. Dress warmly for the weather, bring binoculars and cameras. More info and RSVP — appreciated but not required — 703-499-4954 or alliance@pwconserve.org (There will be no walk in December because of the Christmas Bird Count.)

Sunday Afternoon, November 24, 1 - 3 pm — Phil Silas Christmas Bird Count Workshop at the Nat'l Wildlife Federation, 11100 Wildlife Center Drive, Reston, VA. The workshop offers tips on preparing for a winter bird count and will review how to identify many of the birds seen in our area in winter. Free, but registration is required. <https://www.eventbee.com/v/christmas-bird-count-workshop/event?eid=113285032>

December

Thursday, December 5, 10 am - noon — Hike with a Naturalist at Bull Run Mountains Conservancy. On the first Thursday of every month, join a professional naturalist and discover the flora and fauna of the local region. Free program and all are welcome. Meet at the Mountain House.

Sunday, December 22, 10 am - 4 pm — VNPS Potomack Chapter will hold its annual Winter Solstice Walk at the C&O Canal National Historic Park. Meet at Great Falls Tavern Visitor Center, Potomac, MD

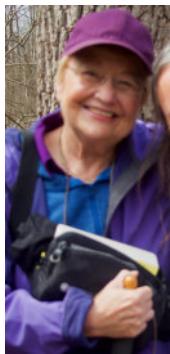
January 2020

Thursday, January 2, 7:30 p.m. — PWWS Member Slide Show meeting. Bethel Evangelical Lutheran Church 8712 Plantation Lane, Manassas

Members are encouraged to share their nature- and plant-related photos. Please contact Nancy Vehrs if you would like to present a slide show. nvehrs@yahoo.com



Do continue to watch for announcements on our FaceBook page or in your email box for Fall and Winter events of interest. <https://www.facebook.com/Prince-William-Wildflower-Society-a-Virginia-Native-Plant-Society-Chapter-142292732540373/>



Clubmosses: An Ancient and Interesting Group of “Fern Allies”

(Adapted from *Wild News* article from January-February 2013, edited by Deanna High)

By Marion Lobstein

In the late autumn and winter in northern Virginia, it is indeed a joy to see green plants. Many of our ferns and fern “allies” are evergreen, adding color to our woods in the late fall and winter months. Fern allies include the Horsetails, Clubmosses, Spikemosses, and Quillworts. In this article, we will consider the Clubmosses or “Lycopodiums.”

The term Lycopodium is derived from *Lyc* meaning wolf and *podium* meaning foot/claw. The common name “Clubmoss” is based on the premise that at first glance these plants resemble mosses (mosses are Bryophytes and thus, non-vascular plants), and because they often have club-like structures that produce spores. Clubmosses are all perennial evergreen plants with numerous small leaves. Individual plants in many species are connected by horizontal stems that run above ground (runners) or below ground (rhizomes); the actual roots are rather shallow. None of the Clubmosses are flowering plants, but all are vascular plants with an interesting strategy of releasing spores at a life stage that few people see outside of a science lab.

Clubmosses or Lycophytes evolved at least 410 million years ago according to fossil evidence and are one of the earliest groups of vascular plants (plants with special tissues, xylem and phloem, to conduct water and food). Some 300-plus million years ago, tree forms of both Clubmosses and Horsetails along with Ferns dominated the great coal swamps of the Carboniferous geological period. Tree forms of Clubmosses that once reached heights of 100 feet have left an excellent fossil record of the woody tissue of tree forms.

Clubmosses, along with Horsetails and Ferns, have a primitive reproductive strategy. In many species of Clubmosses, club-like projections or “candles” held above the small leaved, conifer-like stems are known as strobili (strobilus, singular form) and have structures called sporangia (sporangium, singular form). In other species, the sporangia are formed on certain leaves of the plant. Each sporangium produces numerous minute spores

(*lycopodium powder*), which will germinate to form a small, thin leafy stage of the plant’s life cycle known as the gametophyte (the stage that produces gametes- eggs and sperm). In many species of Clubmosses, the gametophyte stage develops underground, and symbiotic fungi provide the nutrition for this stage of the plant, which may persist for up to seven years in a dormant form and take up to 15 years to complete the sexual reproductive stage. In other species, the gametophyte stage may be photosynthetic and develop above ground. This stage of the plant life cycle has both structures—antheridia, producing flagellated sperm; and archegonia, producing eggs. The sperm swim through a film of water to fertilize the eggs. Fertilized eggs develop into multicellular embryos that form the sporophyte (spore-producing stage of plant)—the stage of the plant that we usually see. Many species of Clubmosses also reproduce asexually by underground horizontal stems (rhizomes or runners) or by special structures called gemmae (gemma singular form) that are groups of cells on the tips of the stems that detach and form new plants.

Human uses of Clubmosses are numerous for medicinal, dyeing, pyrotechnic, and decorative purposes. Clubmoss spores and teas from plant leaves have been used since ancient times in both American Indian and European cultures. Medicinal uses included treating urinary tract problems, diarrhea and other digestive tract problems, relieving headaches and skin ailments, and inducing labor in pregnancy. In some cultures, the spores have been purported to act as an aphrodisiac. The spores repel water and have been used as a powder on skin rashes and even on baby bottoms, and to treat wounds. Clubmoss spores once were used by pharmacists in the coating of pills. In both the Americas and Europe, Clubmoss plants were used in dyeing fabrics and other items. The plants and/or spores can be used directly or as a mordant (substance to lock in other dyes) in the dyeing process. Spores are also very flammable due to their high oil content. They were used in Indian cultures for ceremonial purposes, when medicine men tossed the spores into a fire for a flash of light. The spores ignite with a bright flash of light and were used in flash photography, in stage productions, in fireworks (up until the 1950s), and in chemistry labs. At one time, Clubmoss plants commonly were used for Christmas decorations. Species in which individual plants are connected by rhizomes or runners were ripped from the ground and used as decorative ropes of greenery. Since Clubmosses are slow-growing plants, many groups (including VNPS) in the 1990s waged campaigns to discourage this practice.

Taxonomy of Clubmosses in Lycophyaceae

In both American Indian and European cultures, uses of Clubmosses dates back to ancient times. Early European botanists and taxonomists, such as John Ray in the 1600s and Carolus Linnaeus in the 1700s, gave Clubmosses the name of *Lycopodium*. Linnaeus used this genus in his *Species Plantarum* (1753) but still classified Clubmosses with *Muscus* or true mosses. In the 1762 edition of *Flora Virginica*, John Clayton and Johann Gronovius continued the convention of placing *Lycopodium* species under *Musci*, the mosses. There are five species of *Lycopodium* described in the *Flora Virginica*, including the Tree Ground-pine, Shining Clubmoss and Foxtail Clubmoss. In 1800, Johann Jakob Bernhardi proposed another genus of *Huperzia* for Clubmosses that did not have separate club-like strobili (structures bearing the sporangia that produce spores) on the leafy stems.

Lycopodiaceae, the family in which Clubmosses are now placed, was proposed by Charles Francois Mirbel in 1802. As more details have become known about the life cycles of Clubmosses as well as more recent work with DNA, other genera have been proposed for Clubmosses. The chart below reflects information on the genera included in both the *Flora of Virginia* manual and the *Flora of Virginia* Mobile App.

In the *Flora of Virginia* manual, the Clubmosses are covered in the “Taxonomic Treatments” section under Lycophytes along with the Quillworts (Isoetaceae) and Spikemosses (Selaginellaceae). In this section of the manual, the major groups of vascular plants are arranged in evolutionary or phylogenetic order with the

Lycophytes, the oldest group treated first. The dichotomous keys to genera of Clubmosses in the *Flora of Virginia* manual and the Flora of Virginia Mobile App use the vegetative and reproductive structures as well as the growth patterns to sort out these genera. The excellent illustrations in both the manual and the App as well as photographs in the App will be of use in sorting out the Clubmosses in our area. The Flora glossary will help you understand terms used in the keys and in the genera and species descriptions with which you may not be familiar. In the App’s “Graphic Key” there is an icon for Fern Allies under which Clubmosses can be identified. Photo: *Appalachian firmoss*, *Huperzia appressa*, by Tim Howard



Genus	Origin	Common Name	Named by
<i>Dendrolycopodium</i>	<i>Dendro</i> , meaning tree; <i>lycopodium</i> (see below)	Tree clubmosses	A. Haines, 2003
<i>Diphasiastrum</i>	<i>Diphasium</i> , a generic name for clubmosses; <i>-astrum</i> , incomplete resemblance	Running cedar or pine	J. Holub, 1975
<i>Huperzia</i>	Named in honor of Johann Huperz, a noted German botanist	Fir mosses	J. Bernhardi, 1800
<i>Lycopodiella</i>	<i>Lycopodium</i> (see below); <i>-iella</i> , meaning diminutive	Bog Clubmoss	J. Holub, 1964
<i>Lycopodium</i>	<i>Lyco</i> -wolf; <i>podium</i> -foot/claw	Running Clubmoss	C. Linnaeus, 1753
<i>Pseudolycopodiella</i>	<i>Pseudo-</i> meaning false; <i>lycopodiella</i> (see above)	Carolina Bog Clubmoss	J. Holub, 1983
<i>Spinulum</i>	<i>Spina</i> , bristly or spiny	Bristly Clubmoss	A. Haines, 2003

Worldwide, there are 10 to 15 genera and 350 to 400 species of Lycopodiaceae, the Clubmoss Family. In the *Flora of Virginia* manual and the App there are 14 species of Lycopodiaceae. In the northern Virginia counties extending to the Blue Ridge Mountains and adjacent counties, there are 12 species of Clubmosses or "Lycopodiums." In the past, these were classified in a single genus *Lycopodium* (*lyco-*, wolf; *-podium*, foot) but in the *Flora of Virginia* manual and the Flora of Virginia Mobile App, these 12 species in our area are now placed in 6 genera, as summarized in the chart below:

Species of clubmoss	Synonyms	Common names
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<i>Dendrolycopodium dendroideum</i>	<i>Lycopodium obscurum</i> var. <i>dendroideum</i> ; <i>Lycopodium dendroideum</i>	Tree Ground-pine
<i>Dendrolycopodium hickeyi</i>	<i>Lycopodium obscurum</i> var. <i>hickeyi</i>	Hickey's tree-clubmoss
<i>Dendrolycopodium obscurum</i>	<i>Lycopodium obscurum</i>	Common tree-clubmoss
<i>Diphasiastrum digitatum</i>	<i>Lycopodium digitatum</i> ; <i>Lycopodium flabelliforme</i>	Common running-cedar/pine
<i>Diphasiastrum tristachyum</i>	<i>Lycopodium tristachyum</i>	Ground-cedar, blue running-cedar
<i>Huperzia appressa</i>	<i>Lycopodium selago</i>	Appalachian fir clubmoss
<i>Huperzia lucidula</i>	<i>Lycopodium lucidulum</i>	Shining clubmoss or shining firmoss
<i>Lycopodiella alopecuroides</i>	<i>Lycopodium alopecuroides</i>	Foxtail clubmoss
<i>Lycopodiella appressa</i>	<i>Lycopodium appressa</i>	Southern bog clubmoss
<i>Lycopodiella inundata</i>	<i>Lycopodium inundatum</i>	Northern bog clubmoss
<i>Lycopodium clavatum</i>	<i>Lycopodium clavatum</i>	Running clubmoss or staghorn clubmoss
<i>Spinulum annotinum</i>	<i>Lycopodium annotinum</i>	Stiff/bristly clubmoss

As you walk in our local woods during the late fall and winter months, keep an eye out for this fascinating and attractive group of plants. If you know someone who still uses clubmoss ropes for Christmas decorations, please remind them of the delicate and fascinating life cycle and slow growth of these important plants of the forest floor.

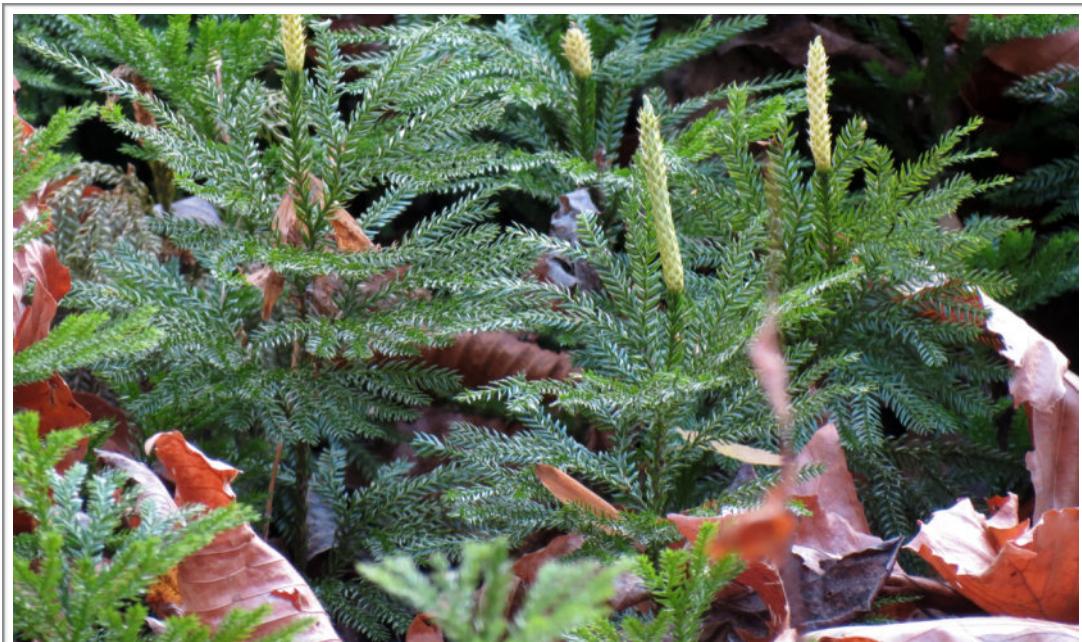


Photo: *Lycopodium annotinum*, courtesy of Pixabay

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1887 Fern drawing by
Franz Eugen Köhler in
Medizinal-Pflanzen

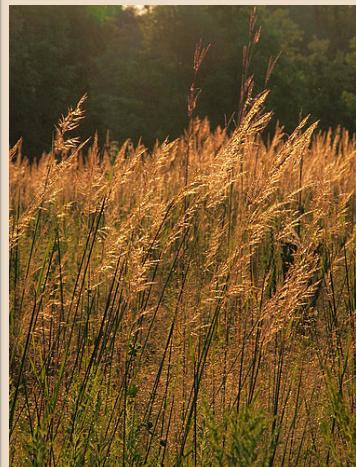
Next Meeting: Thursday, November 7, 2019, 7:30 pm

Dr. Andrea Weeks "Digitized Herbaria Open a New Chapter
for Native Plant Research and Education for Virginia"
Bethel Lutheran Church, Plantation Lane, Manassas, VA

1



2



NOVEMBER
BEAUTIES

Virginia is graced with rolling hills and high meadows of the Piedmont and rich, flat fields of the Tidewater. At this time of year the standouts are her native grasses; their thin spires blowing in the winds, they animate the landscape with their rich colors and interesting textures.

3



4



1. *Muhlenbergia capillaris*, commonly hairawn muhly. Credit: Pixabay

2. *Sorghastrum nutans*, commonly Indiangrass, credit: Martha Barrett, Cowling Arboretum

3. *Schizachyrium scoparium*, commonly Little Bluestem, credit: Dropseed Native Plant Nursery

4. *Bouteloua curtipendula*, commonly sideoats grama. Credit Wikipedia Public Domain