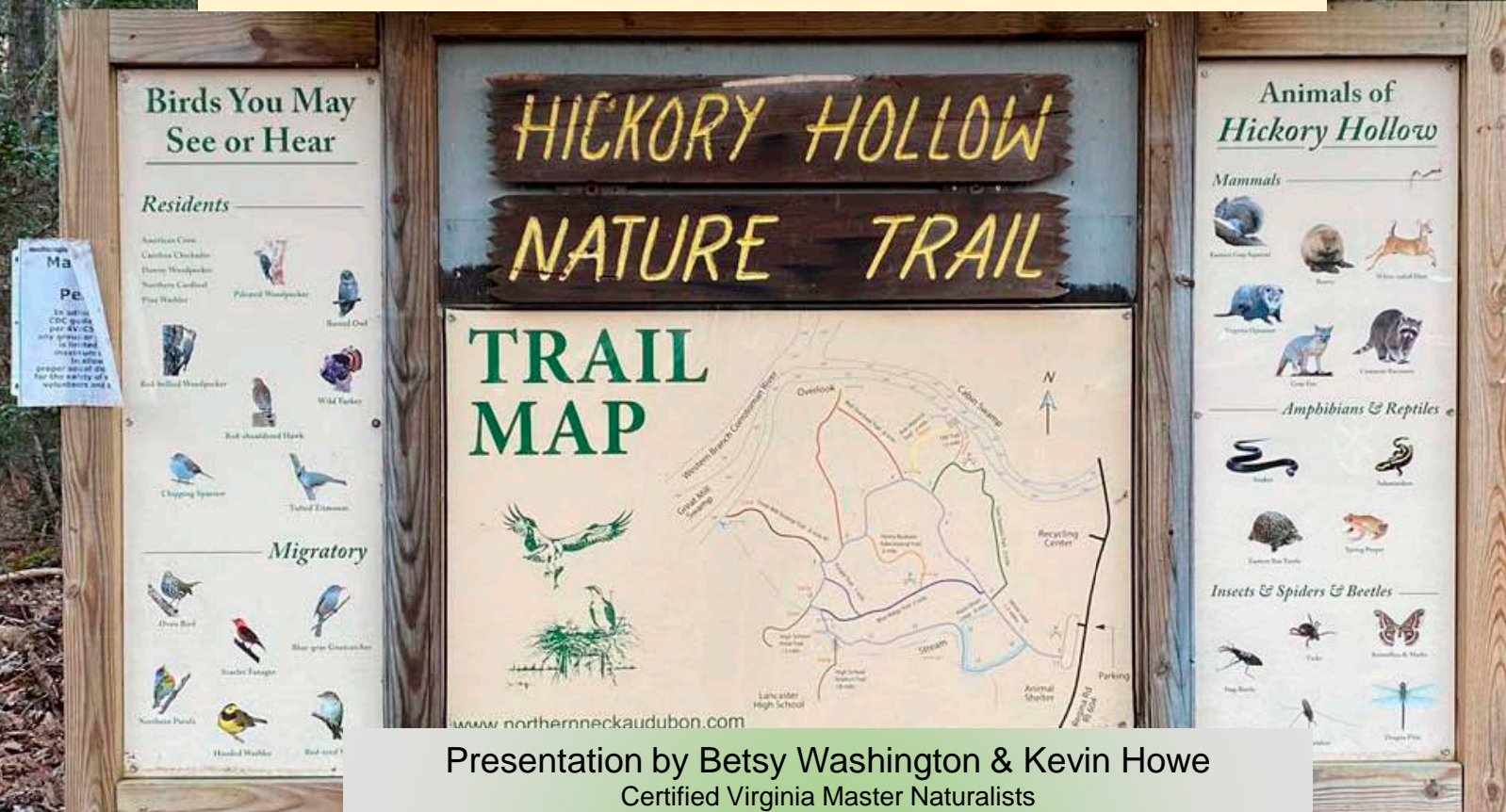


NN Master Naturalists Hickory Hollow Natural Area Preserve A WINTER VIEW

Part 1 of 2



Presentation by Betsy Washington & Kevin Howe

Certified Virginia Master Naturalists

Photos by Betsy and Kevin unless otherwise noted

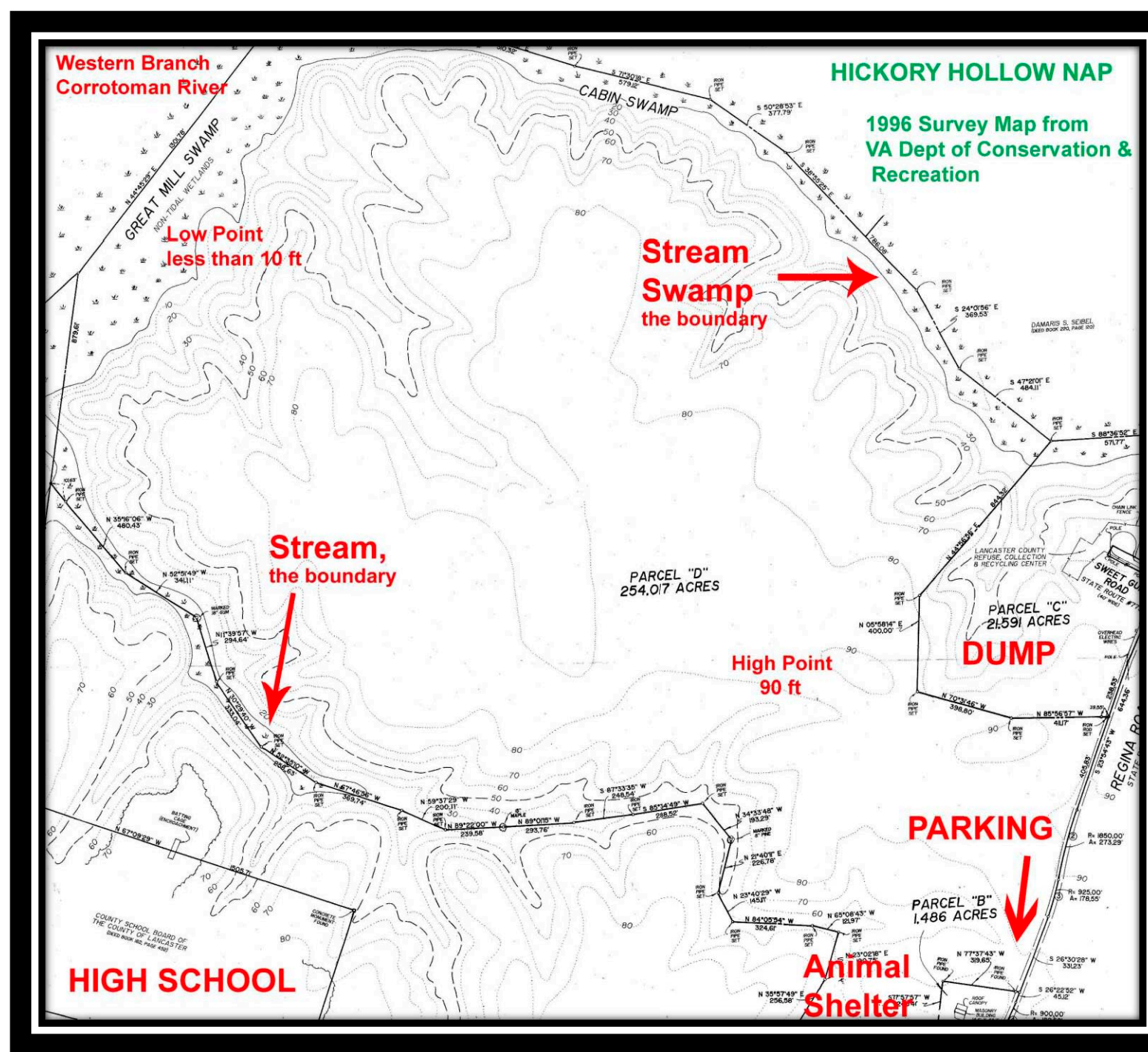
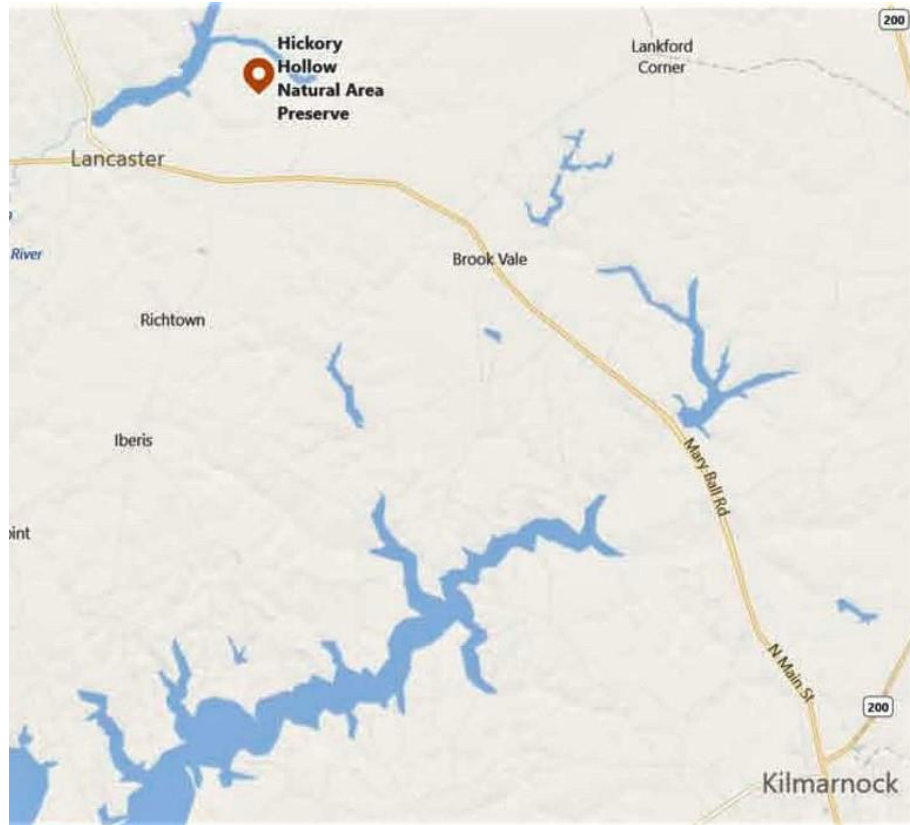
Emails: bwash99@verizon.net juniper@erols.com

PLEASE NOTE: THIS PRESENTATION WAS PUT TOGETHER TO BE GIVEN LIVE SO SOME SLIDES MAY LACK CERTAIN INFORMATION THAT WAS GIVEN IN THE LIVE PRESENTATION.
A video of the live presentation will soon be posted.

HICKORY HOLLOW VIRGINIA NATURAL AREA PRESERVE

Located on Regina Road (VA 604), off
Route 3 just east of Lancaster.

- Owned by NN Audubon Society
- Managed by VA DCR
- County owned from 1887 to 2000
- Audubon purchased it in 2000 to protect the land in perpetuity for rare ecological communities



Hickory Hollow Trail Map

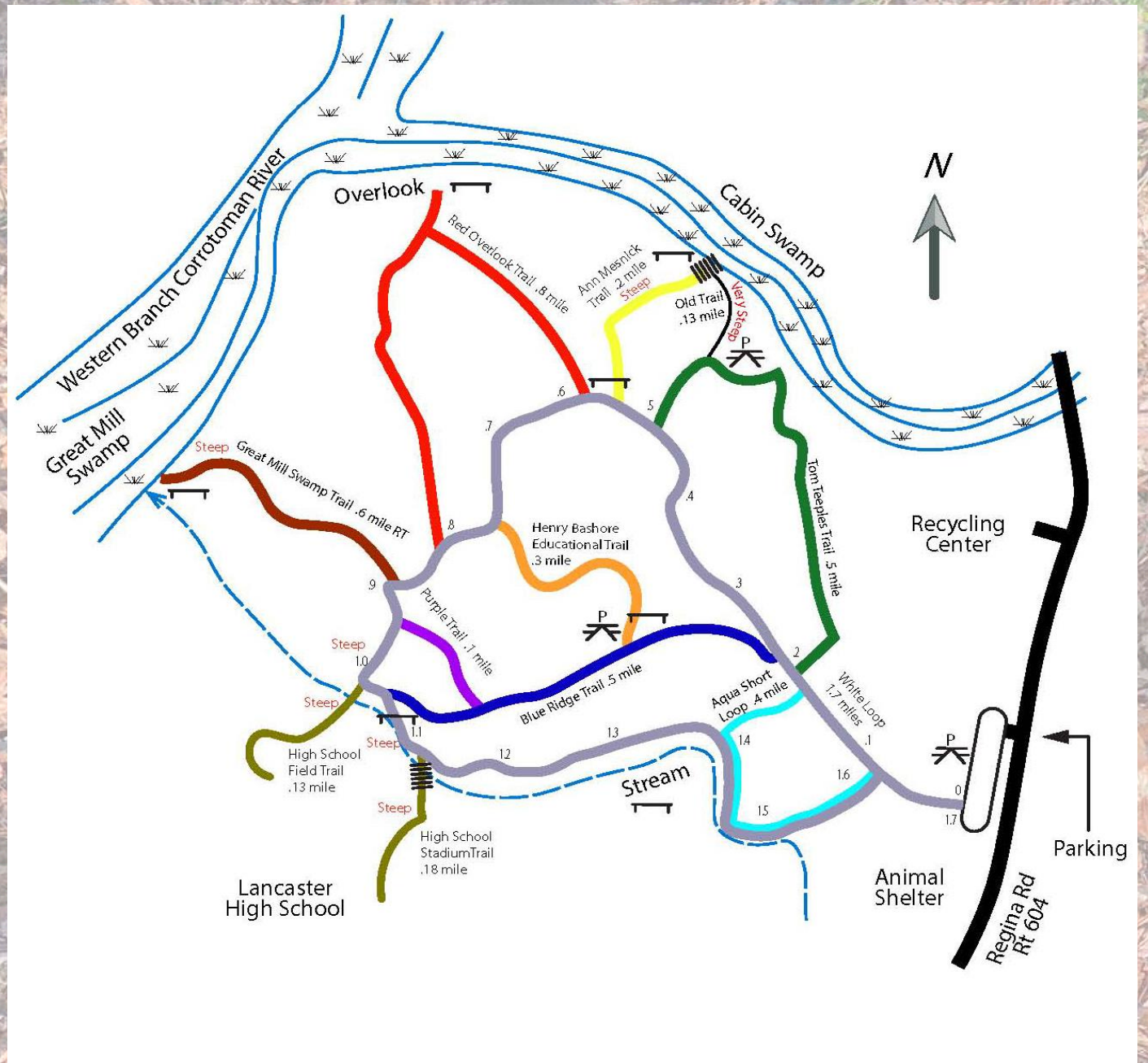
As you can see on the map, there are many trails through Hickory Hollow, all of which are marked with painted marks (blazes) on trees or posts. Trail colors correspond to colors on this map with the exception of the Grey colored trail on this map; it is actually marked as the White Trail in the Preserve.



Post Blaze

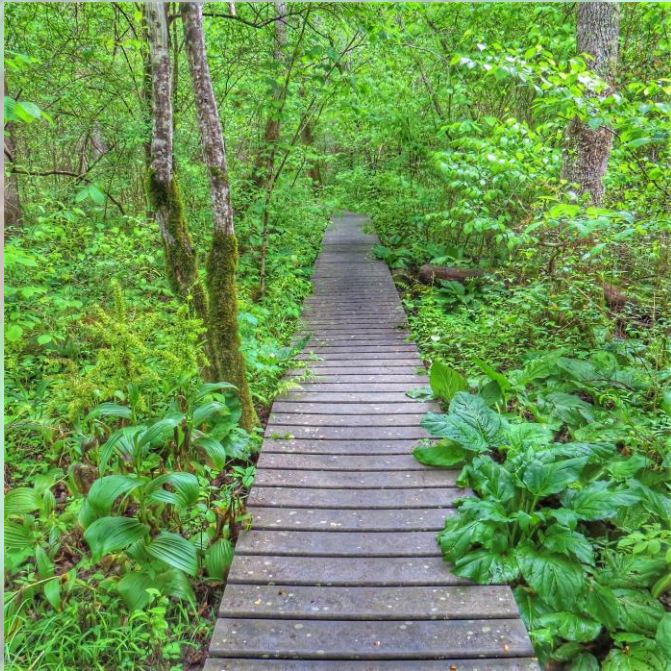


Tree Blaze





**Cabin Swamp
in December**



Cabin Swamp in late May

Cabin Swamp – A Rare Botanical Treasure

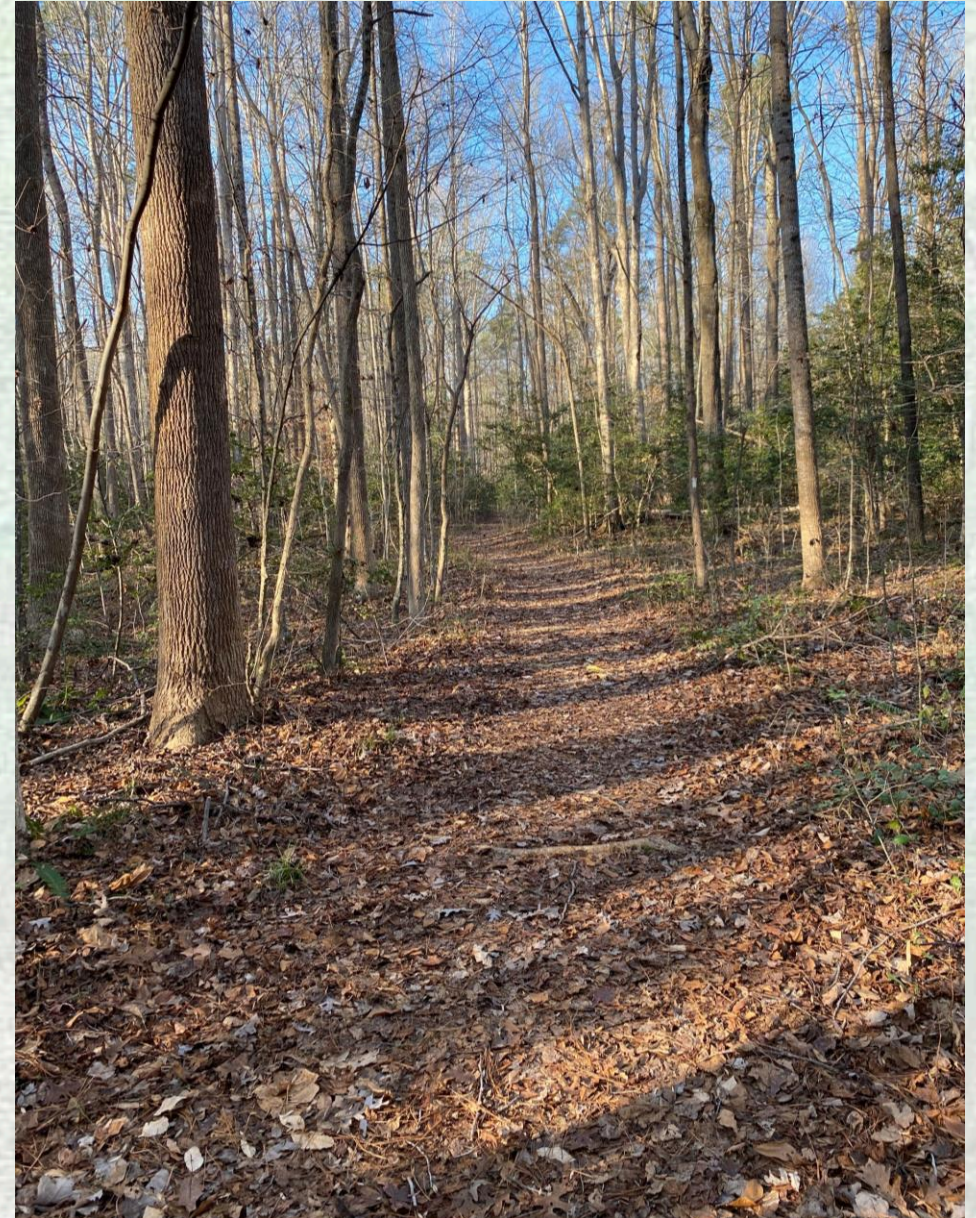
- A very rare coastal plain seepage swamp containing many rare plants including rare mountain disjuncts (species normally found in high elevation mountains of SW VA).
- The swamp lies at the bottom of several ravines that have cut down into marine seashell deposits that were formed millions of years ago when the Coastal Plain was covered by the ocean. The dissolving of the shell deposits has changed the soil and water chemistry of this small swamp area (22 acres) creating a habitat found in few other places on earth. This globally rare plant community contains plants that are unusual or rare in Virginia, yet it supports a high level of biological diversity.

An astonishing 500 species of plants have been reported from Cabin Swamp, as well as 125 species of birds.

- Several rare Dragonflies and Damselflies depend on forested seeps like Cabin Swamp. as well as several early woodland butterflies.
- Rare mountain disjuncts include: Marsh Marigolds, American False-hellebore, globally rare Kentucky Lady Slipper orchids. Other unusual plants include Skunk Cabbage, Cinnamon, Royal Ferns, and many sedges. And of course, Skunk Cabbages thrive in the saturated soils of the swamp.

The Mixed Oak - Hickory Forest

- Mixed hardwood forest of Oaks and Hickories. These tall deciduous trees make up the canopy layer of the forest and lose their leaves in fall.
- White, Northern Red, Black Oak, & Southern Red Oak are common in this coastal plain forest as is the Mockernut Hickory.
- In moister soils along streams and swamps, Beeches, Red Maples, Swamp Chestnut Oaks, Green Ashes and Tulip Poplars.
- Take a moment to admire the various types of bark and branching structure that light up the winter forest.



White Oak



Northern Red Oak



Mockernut Hickory



Bark is Beautiful

Ironwood



Loblolly Pine



Common Persimmon



Tulip Poplar, *Liriodendron tulipifera*



- Tall, straight columnar trunks,
- often the tallest tree in East
- Dry scaly cone-like fruit make good winter ID character
- Prefers moist, rich soils of lower slopes
- Host to Tiger & Spicebush Swallowtails, Tulip Tree Silk Moth
- Nectar attracts Hummingbirds & bees
- Squirrels and deer eat seeds



American Beech, *Fagus grandifolia*



Smooth gray, elephant-hide bark

Dead leaves hang on Saplings/lower branches

Buds are long & tapered lengthening towards spring – good ID

Extensive surface roots,

Beech nuts are important Wildlife food source

Loblolly Pines

- Some Loblolly are remnants of a past forest
- Young not shade tolerant and will be replaced by more shade-tolerant trees over time
- Rugged bark helps protect loblollies from fires
- Long, lustrous needles in bundles of three



Ironwood, Musclewood, Blue Beech, *Carpinus caroliniana*



- Smooth, gray sinewy bark
- Often multi-trunked, hard dense wood
- Common understory tree
- In the Birch family with catkins
- Larval host to Tiger Swallowtail & Red-spotted Purple. Bobwhite, Yellow-rumped Warblers, Wild Turkeys and other birds & mammals feed on catkins and seeds.

American Holly, *Ilex opaca*



- **Very common understory tree in coastal plain forests**
- **Evergreen, spiny leaves**
- **Important winter food for songbirds e.g. robins, cedar waxwings.**
- **Nectar rich flowers in May important to bees**

Mountain Laurel, *Kalmia latifolia*



- Forms thickets
- To 25' tall
- Acidic soils on North slopes
- Rare Oak-Beech-Kalmia Community above Cabin Swamp
- Dense gnarled branches

Cranefly Orchids



- Woodland orchid found in moist forests
- Single evergreen leaf in fall with raised purplish bumps & purple underneath.
- Green all winter, go dormant in spring.
- Summer stems emerge with tiny pale greenish-brown flowers resembling “Craneflies”
- Pollinated by moths at night.

Downy Rattlesnake Plantain, *Goodyera pubescens*



- Another common orchid.
- Evergreen leaves looks like snakeskin
- Ground-hugging basal rosette
- A fuzzy flowering stem in summer densely packed with white flowers.
- Pollinated by bumblebees & native bees

Christmas Fern

- Evergreen fern grows in clumps
- Extremely adaptable to dry or moist soils
- Evergreen fronds leathery & each leaflet has a small lobe or toe at its base, **“Santa’s boot”** .. . See arrow



The stunning new fronds (fiddleheads) are covered in silky hairs and emerge in March.

Running Cedar



- Clubmosses - primitive group of plants from before the age of the dinosaurs when they grew to tree-like proportions.
- They have *vascular systems*, stems and leaves.
- Form large patches of evergreen groundcover with upright shoots with fan-like branches.
- Club-like structures hold spores on separate forked shoots.
- Common in dry, acid forests, very slow-growing; a large colony may be decades old and *should not be collected or moved*.

Princess Pine, Tree Clubmoss, *Dendrolycopodium obscurum*



- Resembles a small “pine tree” with upright stems and whorls of branchlets
- Up to 12” with fine needle-like leaves
- Spreads by trailing stems and rhizomes to create colonies
- In late summer, single club-like structure at tips of upper branches releases clouds of tiny spores
- Indicator species for very moist, acidic, nutrient poor soils.

Partridge-berry, *Mitchella repens*



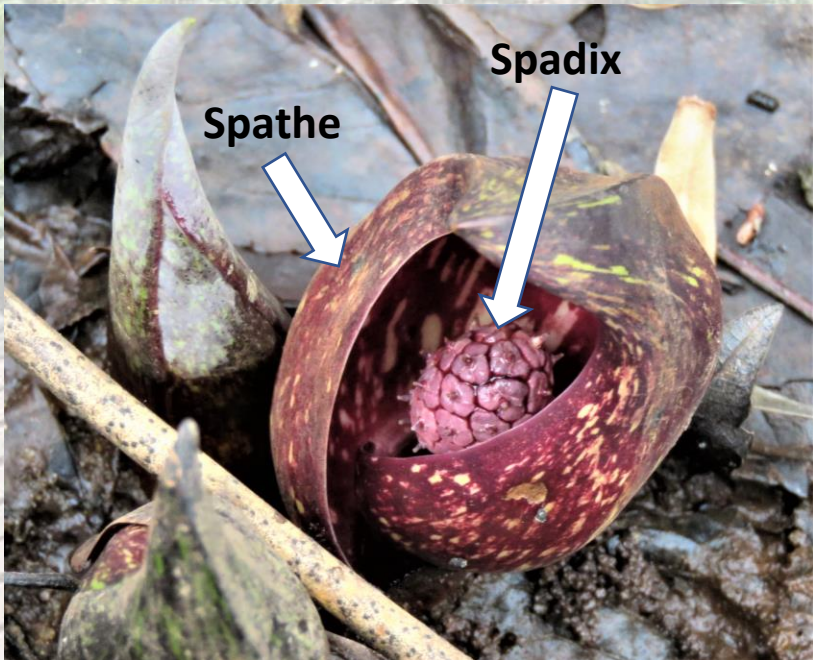
- Creeping groundcover with opposite, evergreen leaves
- Paired, tubular white flowers form a red berry that persists into winter
- Fruits relished by songbirds, turkey, quail, & small mammals

Virginia Heartleaf, Heartleaf Ginger, or 'Little Brown Jugs'



- Evergreen with heart-shaped leaves with pale mottling
- Only one new leaf emerges in spring
- Leaves and roots smell like ginger
- Early spring flowers often hidden under foliage & leaf litter
- Flowers are “little brown jugs”
- Pollinated by tiny flies and insects





Skunk Cabbage

- Grows in rich swamps and wetlands with saturated soils
- Earliest wildflower to bloom; usually in bloom by January 1
- Look closely at soil level along boardwalk in leaf litter.
- Fleshy hood is dark purplish-burgundy color with spots/mottling
- Emits skunky odor to attract its pollinators - carrion and flesh flies
- Able to generate enough heat to raise temperature up to 70 degrees, even when snow is on the ground.
- Huge contractile roots pull plants down a few centimeters a year, keeping flowers at ground level
- Huge cabbage-like leaves emerge in spring, then die back and go dormant in late Summer

Mosses



- Mosses, an ancient group that diverged from algae
- No vascular system or true roots; leaves - soak up water directly
- Mostly a single cell thick, requires moist, shady environs
- Reproduce by spores
- Provide a home & nest sites for many tiny organisms ranging from arthropods to water bears & insect eggs



Sphagnum Moss, *Sphagnum sp.*

- Found in bogs, swamps and other wet, shady habitats
- Central upright stem in tightly arranged clusters
- Many branches crowded at top creating a “mop-head”
- Many, many species often needing microscope to ID
- Called habitat manipulators, creating hummocks in swamps supporting numerous species of sedges, ferns, and orchids, microorganisms, and salamanders

Delicate Fernleaf Moss, *Thuidium delicatulum*

- Aptly named, with twice or thrice divided fern-like leaves
- Common fern of moist soils, rotting logs & tree bases
- Distinguished by yellow-green leaves & long stems, and fern-like foliage
- Forms extensive mats
- A favored habitat & nest sites of several species of salamanders



Common Tree Skirt Moss, *Anomodon attenuata*



- Covers tree bases, often on north side
- Dull green with tiny bumps on leaves
- Long stringy structure curling when dry, bushy with flat, tapered tips when wet

Shingle Moss, *Neckera pennata*

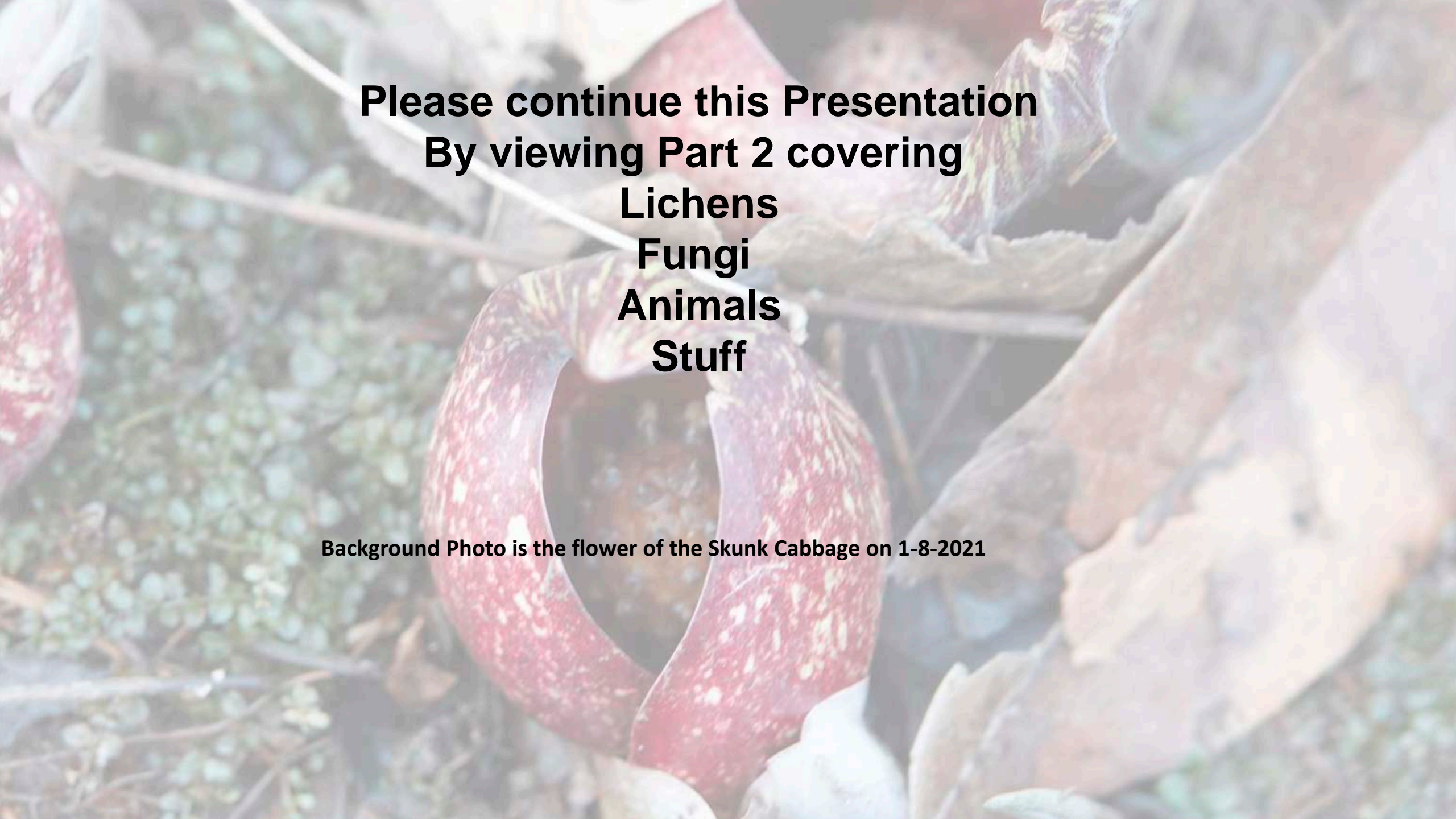


- Moss with cosmopolitan distribution but rare in our area.
- Found on tree trunks, especially on old hardwoods in moist woods.
- Flat branches of wiry branches hang free and stand out from trunks
- Leaves noticeably wavy
- Occurs mostly on ironwoods in Cabin Swamp.
- Considered an indicator of old growth forests

Snakeskin Liverwort, *Conocephalum selebrum*



- A Rarely noticed plant
- Like Mosses, Liverworts are ancient plants
- They have no vascular system, stems or true leaves and reproduce by spores
- Flat ribbon-like plants are only one-cell layer thick.
- *Snakeskin Liverwort* is aptly named and can be seen from the Boardwalk at Cabin Swamp at the base of trees in wet soils.
- Look carefully; beauty is in the details!



**Please continue this Presentation
By viewing Part 2 covering
Lichens
Fungi
Animals
Stuff**

Background Photo is the flower of the Skunk Cabbage on 1-8-2021