#### **Fern Rock Nature Trail**

This nature trail is located on top of the mountain, just southwest of Worlds End State Park, on the western side of State Route 3009 (Worlds End Road.)

The trail was created through collective efforts of many individuals. It was initiated by Girl Scouts from nearby Camp Lycogis. Over the years it has been maintained by students from Sullivan County High School, the local Youth Conservation Corp, Boy Scouts of America and Girl Scouts of the USA. Most recently, in 2010, the TREHAB Youth Summer Employment program, consisting of 10 teenagers from Sullivan County, cleared and re-blazed the entire trail and replaced and improved the foot bridges.

The ferns and rocks of the area lend their name to the trail. You will soon discover the rich, moist, acidic soils of the forest supports delicate, lacy- leaved ferns among a rocky forest floor. The coarse, quartz-rich sandstone rock that is scattered throughout the trail was formed from sediment of an ancient ocean during the early Mississippian period 340-350 million years ago.

During this 2-hour hike you will traverse 2 miles of flat but rugged terrain. Please wear sturdy footwear and watch your step. During wet periods the trail may be muddy in low lying areas. Please stay on the marked trail, following the yellow rectangular blazes with the blue letters "FR". There is a shortcut trail, for those hikers who want to cut the trip to about 1 hour. The shortcut trail is blazed with yellow rectangles with a blue "S". You can follow the narrative guide along the 31 stations to help you learn about forest ecosystems.

Please note that camping along this trail is not permitted. Camping in other locations on the State Forest is allowed with a free camping permit. Contact the Resource Management Center for details.

### **Loyalsock State Forest**

The Loyalsock State Forest, located in Sullivan, Lycoming and Bradford counties is a valuable part of Pennsylvania's 2.2 million-acre State Forest system. It receives its name from the Loyalsock Creek, which winds for over 60 miles through the forest district.

The Loyalsock State Forest contains about 115,000 acres, characterized by high plateaus and ridges cut with numerous deep stream valleys. Northern hardwood tree species, such as birch, beech and maple associated with black cherry, white ash, tulip-poplar and hemlock, fill the forest. The beauty of these hardwoods, combined with the spectacular topography provides for a diversity of forest based recreational opportunities. Under the provisions of the forest's Resource Plan, forest managers integrate this recreational potential with the increasing demand for sustained yields of high-quality water, beneficial wildlife habitat, and valuable wood products. These requirements, not only depend heavily on scientific expertise, but demand the full cooperation of all forest users.



If you remain quiet during your hike, you may see a variety of wildlife in their natural habitat such as this wood turtle. Be sure to bring along a camera!

#### **Dual Certified Forest**

Pennsylvania's 2.2-million-acre state forest system is one of the largest dual certified forests in North America. The forest is certified under Forest Stewardship Council™ and Sustainable Forestry Initiative© standards.

The FSC© is an independent organization supporting environmentally appropriate, socially beneficial, and economically viable management of the world's forests.

SFI© certification focuses on protection of water quality, biodiversity, wildlife habitat, species at risk, and forests with exceptional conservation value. Dual certification ensures that Pennsylvania's state forests are managed to the highest third-party standards.





## For more information

Loyalsock State Forest Resource Management Center Forest District #20

> 6735 Route 220 Dushore, PA 18614 (570) 946-4049



# Fern Rock Nature Trail

Loyalsock State Forest



Pennsylvania's vast state forest system comprises 2.2 million acres for you to use, enjoy and explore. The Department of Conservation and Natural Resources' Bureau of Forestry manages these forests to ensure their long-term health and to conserve native wild plants.

The Loyalsock State Forest comprises 115,000 acres in Bradford, Lycoming and Sullivan counties.



### Fern Rock Nature Trail

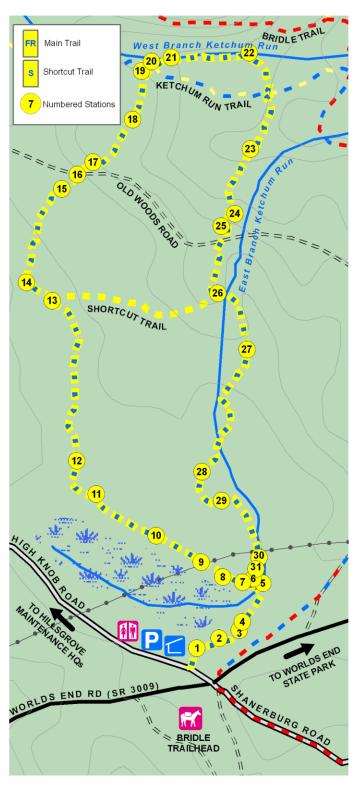
- 1: Listen to your surroundings. What do you hear? As you venture deeper into the forest, human noise will give way to natural sounds.
- <u>Wetlands</u> like this swamp appear throughout the forest. Like a sponge, a wetland can hold large amounts of water. Wetlands like this contain many different kinds of plants that are only found in wet areas, such as the large <u>cinnamon ferns</u> growing in front of the post. Amphibians, such as frogs, toads, newts and salamanders use these areas also.
- 3: A <u>red maple</u> tree grows directly behind the station post and is a predominant tree that grows in this part of the forest. Red maples flower very early in spring. Their seeds are <u>winged samaras</u> that fall like tiny helicopters.
- 4: Beavers moved to the wetland area beside the trail in the summer of 1991. They built a dam and cut trees down for food. As water levels rose, more trees died and the opening in the forest grew larger. The beavers have since moved out after depleting their favorite trees. You may see young trees reclaiming the forest's territory now that the water level is lower.
- 5: Small streams draining swamps generally flow only during a portion of the year and are called *intermittent* <u>streams</u>. Aquatic life in forest streams consists mainly of crayfish, amphibians and insects.
- 6: The trail loop begins here. Follow the trail to the left and watch for the numbered markers.
- 7: The native ground cover here is called <u>stag horn</u> because it resembles the velvety summertime antlers of a deer. It is in the <u>club-moss</u> family. You will also see another club-moss along the trail that is called <u>tree club moss</u>. Club-mosses are sometimes called "ground pines" but they are not even closely related to pine trees. They like cool shade and acidic soil.
- 8: There is a fungus among us! Look closely and you will see a very large log in the advance stages of decay. Decay-causing fungi promote the rotting process of dead tree stumps. Eventually the wood breaks down, returning nutrients to the soil so that they can be used again by living plants.
- 9: The overhead electric line right-of-way serves as a permanent opening, satisfying the needs of certain wildlife and songbirds that prefer to live on <u>forest edges</u>. Here you will find blueberry bushes.
- 10. This <u>yellow birch</u> tree began life on top of a nutrient rich hemlock stump. The <u>nurse stump</u> has rotted away and now the birch tree appears to be growing on stilts!
- 11. There are many areas of loose surface rock along the trail. The melting ice of <u>glaciers</u> carried away some of the soil and left the rocks behind. Watch your step!

You will also notice the group of young <u>eastern hemlock</u> trees that have invaded a sunny opening caused by a small cluster of fallen trees.

- 12: Stop here under the hemlocks and maples and listen to nature. What's the difference from when you first began? If you walk quietly, you may see a variety of wildlife at home in their natural environment.
- 13: The <u>hayscented ferns</u> here carpet the forest floor in green during the summer and their roots provide food for deer during the winter months.

The shortcut trail, begins here. Turn right and follow the yellow rectangular blazes with a letter "S". You will return to the main trail just before station 26 in about 10 minutes.

- 14: This area was timbered in 1990 and fenced for 5 years to protect the young seedlings from deer. The thick young forest now provides habitat for many birds and mammals, including our state bird, the <u>ruffed grouse</u>. In the springtime you may hear the male grouse drumming their wings trying to attract a girlfriend.
- 15: Look for the small trees with greenish bark and lighter colored vertical lines. They are called <u>striped maple</u>. Some people call them "moosewood" or "whistle wood". Rabbits, beavers, deer, and moose enjoy eating the bark.
- 16: Three <u>Eastern hemlock</u> trees grow to the front of the marker. The hemlock provides shelter for wildlife and is Pennsylvania's state tree. To the right of the marker is a large <u>black cherry</u> tree, providing food for wildlife. It is also a very valuable tree for making fine furniture.
- 17: Look for the small spring nearby. Springs are created when groundwater comes to the surface by following rock ledges. Rivers have the same beginnings.
- 18: Plants need sunlight to grow. When the tree canopy gets too thick, it shades the forest floor. When trees are cut, die or are blown over, the sunlight that reaches the forest floor allows young tree seedlings and other plants to grow quickly. What is the difference between the right and left sides of the trail?
- 19: <u>Eastern hemlock</u> trees are evergreens and provide lots of shade to keep our small streams cool in the summertime. They are nature's air conditioners.
- **20:** The cool, tumbling stream before you is Ketchum Run. It holds native *brook trout*, Pennsylvania's state fish. Ketchum Run is designated as an Exceptional Value Waterway. By protecting the forest around the stream, we can ensure that the water stays clean and cold so that the trout and aquatic insects can remain healthy.
- **21:** Water splashing over the rocks replenishes oxygen in the water, improving water quality for aquatic life.
- 22: Sit quietly and watch for a native brook trout searching for its next meal. In small stream like this, brook trout may only get 5 or 6 inches long.



- 23: <u>Sugar maples</u> are valuable for their wood to make fine furniture and also for their sap to make maple syrup. One tree can produce up to sixty gallons of sap each year. It takes 32 gallons of sap to make one gallon of maple syrup.
- **24:** American beech is a gray, smooth-barked tree. Many are lying dead throughout Pennsylvania's forests from a combination insect and disease infestation called beech-bark disease. This beech is infected and dying. Woodpeckers have been excavating the dead wood in search of insects.
- 25: Notice the large boulder. Take a close look at the layers, or <u>strata</u>, that take millions of years to form. The consolidation of layers makes up sedimentary rocks. About 15,000 years ago, the glaciers that retreated from this area left this rock behind.

#### CAUTION: Bridges may be slippery!

- 26: This is the same stream that drained the swamp at station 5 further upstream. Here it has three channels and is excavating a valley for itself. Mountain streams change their courses often. Debris such as dead wood will clog a stream and divert the water into a new channel especially in spring time floods when we have heavy rains and melting snow.
- **27:** A few years ago, a tornado touched down here and uprooted large trees. The downed trees were removed for lumber. The small trees now growing are the result of natural reforestation.

# The trail will cut down over a small rock ledge and turn to the right. Please watch your step.

- 28: The tall shrub just behind the tree in front of the post is our state flower, the <u>mountain laurel</u>. This evergreen shrub blooms with beautiful white to pink flowers from May to July.
- **29:** The tree in front of the post is a sweet birch. Its bark is used for making birch beer.
- <u>30:</u> This patch of small hemlocks is our forest of the future. Hemlocks take about twenty years to reach reproductive maturity. They can continue to produce cones for about 500 years. Record hemlocks are known to live for nearly 1000 years.
- 31: This large tree was mentioned at a previous station and is worth a lot of money for its lumber. Remember the <u>black cherry</u>? In what other ways besides lumber are trees valuable?

Return to Station 6: You have now completed the trail loop. To return to the parking lot, cross the bridge, and follow the trail.