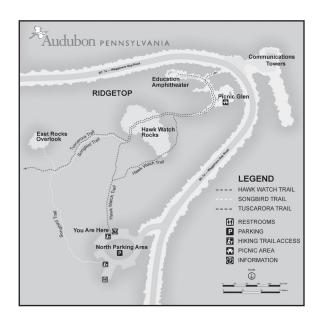
### Welcome to Waggoner's Gap!

The Hawk Trail is located on the north side of the Kittatinny Ridge, also known as Blue Mountain. This trail begins at the parking lot, and winds up to the hawkwatch, which is a rocky outcropping with magnificent views of Perry and Cumberland counties. Using this self-guided brochure, you will make several stops along the trail to learn about various species, wildlife habitat, and the geology of the region. Follow the trail marked with orange birds on the rocks and stop when you see a purple marker. Look around! Somewhere nearby is an interesting feature that is described here.

This self-guided walk follows the rocky path that begins between the two informational signs. Please remain on the designated trail so as to not disturb the wildlife. Do not remove or add anything to the trail.



## Waggoner's Gap Hawkwatch

As early as the late 1930s, a few people journeyed to Waggoner's Gap to watch the fall migration, helping to change the public's perception of raptors from unwanted pests to animals to be admired and studied. In 1948 a Carlisle High School science teacher, Lou Knohr, began periodically counting the raptors that migrate along the Kittatinny Ridge, and later began the daily counts that continue today. Between August I and December 31 each year, volunteers count the daily movement of these birds, monitoring the health of raptor populations.

In 2001, 20 acres of land was granted to Audubon for the purpose of preserving the site as a hawkwatch. In addition, Audubon recently acquired more than 100 acres of property on the west side of Route 74, which provided permanent protection of this part of the Kittatinny Ridge. Waggoner's Gap draws thousands of visitors to hike and watch the spectacle of some 20,000 hawks, eagles and falcons each year.





The Cliff Jones Field Station at Waggoner's Gap State Route 74

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# Self-guided Trail at Waggoner's Gap



Cliff Jones Field Station at Waggoner's Gap

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## I. WITCH HAZEL and WOODPECKER HOLES

Around you, notice small trees roughly 15 feet in height with rounded leaves. These are witch hazels, a common understory tree found throughout Pennsylvania. Unlike most plants, witch hazels bloom in late autumn, their pale yellow flowers lingering until December.

Witch hazel oil, made from the twigs, is used as an astringent for skin care. The fruit is a two-part capsule that ejects seeds with enough force to fly for distances up to 33 feet.

You'll also see a large standing tree with many rectangular holes. These holes were excavated by

pileated woodpeckers searching for carpenter ants. Standing dead trees, known as snags,

are important for native wildlife. Old woodpecker cavities are used by other nesting species such as owls, squirrels and chickadees. Snags are beneficial to the entire forest, providing food and nest sites for many species.

#### 2. OAKS

At this stop, sit on the bench off the trail and admire several species of beautiful native oaks, including chestnut oak, northern red oak and white oak. Oaks

have long been among the most valuable hardwoods, used in building, furniture and flooring, but their ecological importance is far greater. Most

Appalachian forests are dominated

by oaks, whose acorns are an important food source for wildlife, including turkeys, deer, and bears.

3. HOLLOW TREE

Observe the large fallen log with a hollowed out interior. Hollows can form from disease, insects, lightning or other stresses, which open the heartwood of a tree to deterioration decades - even centuries - before the tree falls. Afterwards, the hollow log serves as shelter for many small creatures, from insects and salamanders to mammals. Eventually the hollow log will become nutrient-rich soil that will nourish new trees.

4. GEOLOGY

The great slabs and boulders that underlie the ridge are Tuscarora sandstone, formed from ocean floor 410 million years ago, then buckled into mountains 280 million years ago when continental

plates carrying Africa and North America collided. Tuscarora sandstone is brittle, but resists erosion, and it (and other similar sandstone and quartzite rocks) cap most of the Appalachian ridge system from New York to Tennessee. The exposed rocks are covered with gray-green lichens of several types.

They are not plants, but self-sufficient teams, called composite organisms

made up of fungi and algae – the fungi providing structure and protection from drying, and the algae photosynthesizing sunlight for food.

#### 5. OVERBROWSING

White-tailed deer are the most common large mammal in Pennsylvania - too common, in many places. Because deer eat young saplings and understory plants, over population during most of the last century has resulted in damaged forests, which are so prevalent that the signs often go unnoticed. The absence of a dense understory of

shrubs and the presence of large areas of ferns (which deer avoid eating) are signs of deer overbrowsing at Waggoner's Gap. This has detrimental effects on forest-nesting songbirds and many other species.

6. BURLS

At our final stop, you may notice burls - large, rounded growths emerging from the trunks of some nearby trees.

> A burl usually starts with an injury, infection or other stress to the tree. Over time, the growth may become quite large as layer after layer of tightly-packed, interlocking

wood is added. Burls are prized by craftsmen who carve furniture, sculpture and bowls adorned with the burl's twisting, intricate grain.

