

Chestnut Ridge

The Chestnut Ridge site includes the northern section of Chestnut Ridge from and including the Conemaugh River Gorge to an area just east of Derry. This area includes that section of the mountain that is known to harbor a number of rare species, some of which are associated with a recognized subterranean natural community. Most of these species and habitats are found on the summit of the ridge and in the watersheds flowing off of the western flank of the ridge. The Chestnut Ridge site is largely under private ownership however, both the Pennsylvania Game Commission and the PA Bureau of Forestry own and manage some land within the site. State Game Lands #153 is situated in the northeast corner of the site along the Conemaugh River and encompasses close to 3,000 acres.

A section of Forbes State Forest, the only section of the managed lands on Chestnut Ridge, is situated in the vicinity of the Shirey Run watershed. This section of the mountain is forested mostly with chestnut oak (*Quercus prinus*) and red oak (*Q. rubra*) dominating what would be considered a highly disturbed Dry-Mesic Acidic Central Forest Natural Community on the ridgetop. Many of the oaks on the ridgetop and higher elevations are dead as a result of gypsy moth (*Lymantria dispar*) defoliation thus resulting in a dense shrub layer of blackberry briar (*Rubus allegheniensis*) and a dense ground cover of hay-scented fern (*Dennstaedtia punctilobula*). The oak forest is more intact on the upper slopes. Black birch (*Betula lenta*) appears to be succeeding the oak forest on the ridgetop and at lower elevations chestnut oak drops out and red maple (*Acer rubrum*), sweet gum (*Nyssa sylvatica*), and tulip poplar (*Liriodendron tulipifera*) become more common in the canopy. The middle slopes have an understory of mountain laurel (*Kalmia latifolia*), deerberry (*Vaccinium stamineum*) and blueberry (*Vaccinium pallidum*).

Throughout the site significant outcrops of the Loyahanna limestone geologic formation are present. Associated with this geology are many of the significant species and habitats within the Chestnut Ridge site. The **Solution cave terrestrial Natural Community** is found in a number of different localities within the site including the slopes of the Conemaugh River Gorge. The most concentrated number, and those which harbor two species of concern, are found in the Shirey Run, Bear Cave Hollow and Trout Run area. Known by names such as Bear Cave, Lemon Hole Cave, Con Cave and Rattlesnake Cave, some of these subterranean communities are intact, relatively undisturbed, and provide suitable habitat for two bat species of concern **northern myotis** (*Myotis septentrionalis*) and **eastern small-footed myotis** (*M. leibii*). A third animal species, **Allegheny woodrat** (*Neotoma magister*) is found in high concentrations in this area, but is also found at various locations throughout the site. The woodrat inhabits the deep crevices between boulders throughout the site.

On the top of the ridge and on the south part of the site, the outcrops provide habitat for **thick-leaved meadow-rue** (*Thalictrum coriaceum*). This area has been highly altered due mainly to the loss of canopy trees and resulting take-over by blackberry briar (*Rubus allegheniensis*). To the south is yet another location for a plant species of concern. **Fall dropseed muhly** (*Muhlenbergia uniflora*) is a species that resides in a small semi-forested wetland just below the ridgetop. Known occurrences of these plants are limited throughout the state and add an extra level of importance to the Chestnut Ridge site. Furthermore, several other plants of concern have been found historically within the boundaries of this site.

Threats and Stresses:

The natural communities and species of concern within the Chestnut Ridge site depend upon the undisturbed geology of this site. In the case of the cave dwelling species, disturbance by human visitation or mechanical disturbance adjacent to the caves at critical times of the year could be detrimental to these populations. Continued loss of canopy, over competition by weedy native or non-native plants, direct disturbance to underground or above ground parts of plants and changes in hydrology stand to further impact the two plant species of concern at the site. Loss of canopy and/or direct manipulation of habitat stand as threats for the animal dwelling in rock outcrops, as well as the rare plants found at the site.

Recommendations:

Opportunities to work with the landowners and learn more about the special qualities of the site would be an important first step in beginning conservation efforts of Chestnut Ridge. For a site of this size and condition, preventing loss of integrity through further fragmentation becomes an important consideration in its care and management. Also, monitoring of the existing natural communities and species at the site would help in understanding the present stresses to these living resources.