

2.2 Physiography

Physiography refers to the natural features of the earth's surface, including land formation, climate, currents, and distribution of flora and fauna (HMC, 2000) or the general “look” of the land. A physiographic province is a region of which all parts are similar in geologic structure and climate and which has consequently had a unified geomorphic history; a region whose pattern of relief features or landforms differ significantly from that of adjacent regions (USDA NRCS, 2003).

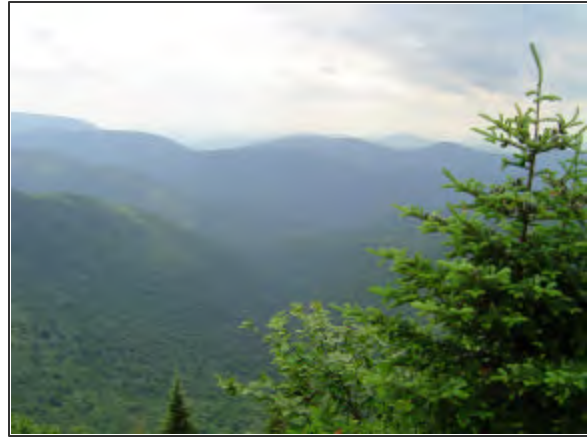


Figure 1 View of Stony Clove Valley from atop Westkill Mountain

The Stony Clove Creek Watershed is located in northeast portion of the Appalachian Plateaus Province, which runs along the Appalachian Mountain range from Maine to northern Alabama. This ancient province surface is only structurally a plateau, having been eroded by stream action over millions of years into what is today a region of high relief. Small, narrow valleys (or hollows) twist through the resulting mountains. The older surface is evident in the pattern of hilltops all tending to reach the same elevation. Such an eroded plateau is known as a dissected plateau (Radford University, 2003).

The Watershed's physiography is dominated by this mountainous terrain. The Watershed is bounded by some of the highest peaks in the Catskills, ranging in altitude from 2,220 to 4,040 ft. The Stony Clove Creek mainstem occupies the valley with tributaries entering the creek from the surrounding steep mountain slopes.

The Stony Clove Creek drains a 32.4 square mile watershed in the High Peaks region of the Catskills, bounded by Hunter, Plateau, Olderbark, Little Rocky, Carl, Tremper, Sheridan, Rusk and Westkill Mountains. Major tributaries include Warner Creek, Hollow Tree Brook, Ox Clove and Myrtle Brook, for a total length of perennial streams (i.e., USGS blue line) in the watershed of approximately 61 miles.

The Stony Clove Creek begins at the deep Stony Clove Notch between Hunter Mountain on the west, the second highest peak in the Catskills at an elevation of 4,040 ft. and Plateau Mountain on the east, the twelfth highest peak in the Catskills at an elevation of 3,840 ft. (Fig. 2). The Stony Clove Creek headwaters are formed at Notch Lake, the small shallow lake at the DEC Devil's Tombstone Day Use Area. The Creek runs down the



Figure 2 Stony Clove Notch

valley for 10.2 miles, jumping back and forth across NYS Rt. 214 several times through Lanesville and Chichester. Stony Clove Creek finally joins the Esopus Creek in Phoenicia with Tremper Mountain on the east at an elevation of 2,700 ft. and Sheridan Mountain to the west at 2,220 ft.

The hydrology of the Stony Clove Creek watershed is discussed in greater detail in Section 2.3, its geology in Section 2.4, and land cover in Section 2.7.