If one were to travel over mountain and through the valleys of this region he would see as he journeyed that there are differences in the appearances of the farm homes and their surroundings as he passed from one community to another. A close observation reveals that there are prevailing differences in the thrift, spirit, and dress of the people in different communities. During summer one will see in one community fields of clover or alfalfa, tall corn, green bluegrass pastures, and orchards heavily laden with fruit, while in another community similar views are very rare. Instead there are many abandoned fields that are overgrown with scrub pine and brambles. The potential fertility of different kinds of soils are responsible for many of these differences.

An attempt will be made in this paper to show the major characteristics of the more important soils and their relation to human environment. Brief sketches of history, settlement and development, climate, geology, and physiography will be included in so far as they may be related to soil development or human environment.

Historical

On March 4, 1681, William Penn was granted 28,000,000 acres of land in America. When the white man first entered the wilds, he found of this grant, the land covered with dense forests of oak and chestnut in which were scattered clumps of pines on the more sandy lands. In these forests he saw nature's beauty in abundance. In the valleys he found fertile soils. On the low lands near streams were small areas of natural meadow. Field, stream, and forest contained an abundance of birds, fish, and game which the American Indian did not molest except when in want of food. The Indian held that the land was given human beings by the Good Manitou for a dwelling place and not for the purpose of being broken up and cultivated. Hunting and fishing for more than what would supply immediately was held in supreme contempt by the red man (2, 3, 4, 6).

This great area of forest land became known as "Penn's Woods" and later "Pennsylvania".

General Description of the Region

The land surface of the Appalachian Valley Ridges has been exposed to weathering and erosion for millions of years (5, 12). Looking north, west, or south from the top of Tuscarora Mountain one can see steep sided and sharply topped parallel mountain ranges, all of which rise to the same general altitude of approximately 2000 to 2200 feet above sea level (12). a passage from one valley to another. The fertile valleys lie from 1000 feet below the mountain tops (12). The elevations range from 500 to 800 feet above sea level (12). These valleys are now highly dissected by tract erosion and dissection. The limestones seem to be least resistant to weathering and are reduced to the lowest elevations of the valley uplands. The quartzites and hard sandstones have been very resistant to weathering and now form the mountain tops while the soft shales dominate the higher uplands and hills to a height of 50 to 500 feet above the level of the limestone valleys.

The topography of the Valley Ridges varies from smooth level limestone valleys to highly dissected shale lands then upward very steep rugged mountain land all of which gives the region a mountain-valley type physiography that provides picturesque mountain scenery and high mountains that shelter deep fertile valleys from storms and cooler winds.

The cool summer climate of the Valley Ridges attracts thousands of vacationists during the hot summer months. Day temperatures rarely exceed 90° F. to 95° F. (11) and the nights are nearly always cool. The summers tend to be rather long for the latitude and are accompanied by heavy snowfall and an abundance of cloudy and foggy weather. The prevailing winds blow from west to east. The region is watered by a 30 to 40 inch annual precipitation (11). The more rainy seasons occur during the spring and fall months when a balmy blue sky and heavy atmosphere hovers over the Valley.

Settlement and Development

There seems to be no record of settlement or of white man being in the Valley-Ridges region before 1713 (9). Rapid settlement of the region was discouraged by the bitter resistance offered by the Indians who prized this region highly for hunting and fishing grounds. During the period of settlement, which extended from 1720 to 1790 (2, 9), there was little law and order on the frontier. Frequently entire families or settlements were wiped out by Indian massacres (2, 3, 9). History records the struggles and violence that brought the Scotch-Irish and endured for the early possession of new lands in the fertile valleys of this region (9).

After being settled nearly 200 years ago, 65% of the Appalachian Valley Ridges (13) occupy an approximate area of 9000 sq. mi. South central Pennsylvania is covered by land that has been repeatedly cut over. In places it has been burned over several times giving rise to great areas of scrub oak.