THE INTER-RELATION OF SOILS AND GEOLOGY.

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(ABSTRACT)

Investigation in many sciences was well advanced before any attempt was made to study the soil. Scientific soil investigation, though late in starting, has had a history similar to that of many other sciences. The work of the Russian soil investigators, as the forerunner of the new soil concept, called attention to the necessity that soil study be quantitative as well as qualitative. Several soil characteristics can already be quantitatively described, and no doubt it will soon be possible to quantitatively ascertain all soil characteristics.

This new concept regards soil as a natural body made up of parts, the characteristics of which are the result of the action of external and internal forces upon the mass of soil material. Neither productive power, climate, nor geology are now regarded as a basis of soil classification as formerly, but they still remain closely allied to soil classification. Geology is particularly helpful to the pedologist in determining the origin, age, and distribution of soil. Southeastern Illinois is excellent territory to illustrate the interrelation of soils and geology, and to provide proof of the new soil concept, because of the variety of formations which exist, and the maturity of the region. Soils with similar characteristics are found to exist on both the rough Ozark ridge and the glaciated plains to the north, despite their difference in origin. Topography and drainage, two very important factors in soil formation, are chiefly responsible for the variations in the soils of this region.