One of the most important questions to be considered concerns the number of times the glacial ice advanced into the region. Did the ice push downward one, two or three times from the northeast and come within the present limits of Northampton County? Also, how shall the deposits of this region be correlated with those of the Mississippi Valley, the generally accepted type sections?

The earliest workers in the region recognized only one ice invasion, the one best preserved and most noticeable because of the development of the fine terminal moraine in the Bangor region. This has been correlated with the Wisconsin ice sheet of the Mississippi Valley.

When glaciated cobbles were discovered in the southwest of this morainal belt, they were explained as outwash material carried by the water resulting from the melting of the ice. However, when ice-deposited material, glacial till, was found in these places it was recognized that at some time glacial ice did extend beyond the "terminal moraine." The belt was termed the "glacial fringe," the "attenuated border" or "extra-morainic drift." Prof. Williams searched the Lehigh Valley to determine the extent of this "fringe." He found it to extend as far as the Schuylkill River, near Shoemakersville, Berks County. To this fringe he applied the name Kansan, but used the term in a different sense than do the geologists in the Central States. He believed that the Kansan deposits, as he described them, represented the first advance of the ice sheet in the region and that near its margin it was thin and accomplished little glacial erosion. He also believed that the ice was more fluid near the margin because of the melted ice and that the front receded quickly. When the front had moved back to the Bangor region there was a long halt and the pronounced terminal moraine was built. Williams therefore believed there was but one ice sheet in the region and his "Kansan" designation only meant the farthest and most rapid advance and retreat of the Wisconsin. In places he terms it the First Phase. When he was confronted with the evidence of greater age characteristics of the deposits beyond the "terminal moraine" he replied that it was natural to find these old-age features because the first advance of the ice picked up the weathered material on the surface. He maintained that the finding of a single or a few fresh rock fragments in the "fringe" deposits, materials that seemed as fresh as similar pebbles in the Wisconsin glacial deposits, was sufficient evidence of approximately the same age of the two. He expressed his view in the expression "the time elapsed since drift deposition is measured by the freshest part." In his search he found pebbles which he regarded as fresh as those of the Delaware Water Gap region. He also called attention to the fresh appearance of the slate directly beneath the till of the "attenuated