

without the aid of the evidence derived from studying the fossils. I therefore asked Mr Gilbert van Ingen, who at that time was officially connected with this department and who had many years' familiarity with the region, to undertake the attack on the difficult situation there presented. Mr van Ingen with the assistance and cooperation of Mr P. Edwin Clark, for many years superintendent of the Newark Lime & Cement Co. at Rondout and mining engineer of long experience, has given the subject very detailed examination and careful study. His results were presented in the report of last year and will be found to afford a well illustrated exposition of the obscure and complicated structure of the region.

Traverses of the Catskill mountains and collections of the fauna of the Port Ewen beds. During a part of the season Mr George H. Chadwick has been engaged in reviewing the section of the Catskill mountains in Greene county, in the hope of ascertaining some new clues to the nature of the life forms in the higher strata. Subsequently he was occupied in collecting as freely as practicable from the limestone and shale beds which constitute the Port Ewen (formerly termed the Kingston) beds and best exposed in the vicinity of Rondout and Kingston. This formation is that at the top of the series originally termed the Helderberg and subsequently Lower Helderberg, and is a sedimentary facies reproducing that of the Catskill shaly limestone below, otherwise known as the New Scotland beds. The fauna of these upper beds has not been carefully analyzed, though there has been a well grounded belief that its affinities were with the later or Oriskany fauna rather than with that of the Helderbergian beneath.

Distribution of the Cobleskill limestone. Reference was made in the last report to the study of this formation, the importance of which as an element in the New York series had not heretofore been recognized. Mr C. A. Hartnagel has continued and concluded this study and has traced the formation from Port Jervis at the south, northward through Orange and Ulster counties and from Schoharie county westward through Otsego.