FOREWORD

This volume on Northampton County is presented in partial fulfillment of a moral obligation that the senior author has long felt. During his occupancy of the chair of geology in Lehigh University since September, 1907, he has been engaged in the study of local geologic problems and has endeavored to keep in touch with all geologic investigations carried on in eastern Pennsylvania and in the adjoining portion of New Jersey. Colleagues in the Department of Geology both of the teaching staff and student body have contributed much. Every year scores of students have been conducted on field trips to various places in the region and many have been assigned to special researches or have on their own accord made similar studies. Numerous operators in the stone industries have brought their problems to the attention of the geological staff. From all these sources a mass of information has accumulated. While many of the problems involved in these investigations have apparently been solved, the number of unsolved questions has increased rather than diminished. The studies are therefore incomplete and hence somewhat unsatisfactory. Nevertheless it seems advisable to put in permanent form a record of observations and present interpretations for the use of students of the six colleges* of the Lehigh Valley and for other persons interested in the geology of this section, either from the practical, scientific or cultural aspects.

There is no doubt in the minds of the authors that many of the conclusions presented will be modified or entirely set aside by later investigators as the result of new information or because of different points of view. Eventually the true explanations will be forthcoming.

Although it may not always appear in the text and maps, there are many points where much uncertainty exists and the statements made are considered by the authors as more or less tentative. They will welcome suggestions and criticisms. Many of the geologic formational contact lines have had to be drawn through regions covered by talus, glacial debris and residual soil and hence are likely to be in error. From time to time information obtained through drilling, excavations or perhaps through geophysical investigations will probably make it possible to correct many of the present conclusions.

At the request of the senior author, the Allentown, and the Pennsylvania portion of the Easton and Delaware Water Gap topographic maps were recently revised and constitute the base for the accompanying geologic map. The field work was practically completed before the revised maps were received and it has not been possible to revisit all places with the new maps in hand. Therefore it is probable that in some cases the transfer of geologic lines and location of various mines, quarries, wells, etc., from the old to the new base may have resulted in some error, but it is hoped that such errors may prove to be slight.

* Muhlenberg College and Cedar Crest College in Allentown, Lehigh University, Moravian College and Theological Seminary, and Moravian College for Women in Bethlehem, and Lafayette College in Easton.

† Although the topography of the Delaware Water Gap quadrangle west of Delaware River has been remapped, the copper plates had not been engraved in 1936 and so the topography for this area on the accompanying map is not revised. Culture at Bangor, Wind Gap and Martins Creek has been brought up to date.