FOREWORD

Since September 1907, the senior author has held the position of Professor of Geology in Lehigh University. During this time his out-of-door laboratory has been the Lehigh Valley, particularly Lehigh and Northampton Counties. Alone, with his colleagues in the department, and with his students, all sections of these two counties have been visited and revisited. In addition many geographic and geologic problems and many bits of information have been brought to his attention by representatives of the various industrial organizations of the region. These have dealt particularly with problems concerning supplies of underground water, the utilization of the rocks of the area such as limestones for portland cement and lime, slates, sandstones, gneiss, sand and clay for structural purposes, weather and climatic conditions, and behavior of streams. As a result a great body of information has accumulated that supplements previously published data.

The author believes that an obligation exists to put the important part of this material into permanent form and to publish it in order that it may be available to a larger number of people. In fulfillment of this implied obligation, the present volume has been prepared. In its preparation, the writer has held in mind the interests of the general reader and of the students of the Lehigh Valley colleges.* So far as possible, technical terms have been avoided. The employment of technical nomenclature, such as every science has developed, permits shorter and more concentrated discussions, but tends to confuse those readers who are not primarily concerned with the particular science. The material included in this volume may have some interest to persons outside this region and unfamiliar with the local background but it is especially written for the residents of the Lehigh Valley and only incidentally for others.

The topics treated by no means constitute all the subjects that might be considered under the head of geography. A complete geography of the county should include many additional subjects, such as the plant and animal life, and the industrial development. It is profoundly hoped that persons competent to deal with other geographic factors may eventually likewise make available their accumulated information. Monastic learning and research in the natural sciences may afford much personal satisfaction to the investigator, but the results made available to the public may give much pleasure to a larger body of thinking people similarly inclined.

It must be recognized that much of this volume is the work of other investigators. As shown in the somewhat elaborate bibliography, scores of other persons have studied and reported on various phases of this work. For more than 200 years information has been accumulating. Some of these contributions are of little merit but many are otherwise and have been freely used. This work therefore represents the investigations of the past and present generations. To all these, but particularly to the writer's colleagues and former students, thanks are given. Since the writer's studies have extended over a period of one-third of a century, it is obviously

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