STRATIGRAPHY

Introduction

By BENJAMIN L. MILLER

Lehigh County constitutes a part of the Appalachian Highlands which extend from Canada to central Alabama and from the Atlantic Coastal Plain on the east to the Interior Plains on the west.

The rock strata exposed in the county range from approximately the oldest to the youngest known on the North American continent, but with several major gaps. Most of the strata present have participated in two periods of earth disturbance of which the Appalachian Revolution at the close of the Paleozoic was the more profound. Folding and faulting have been so great that rarely does one encounter beds that are even in an approximately horizontal position. As a result of the complicated structures and repeated and long continued erosion intervals a greater variety of formations than is generally seen is present within the borders of the county.

Information concerning the geology has been accumulating for almost 200 years. The earliest settlement of the region took place about that time. During the first century of occupation, however, the information left to us concerning observations that may be regarded as of a geologic character is extremely fragmentary and of little present-day value. The second century is very different. From the beginning of the First Geological Survey of Pennsylvania in 1836 to the present, scarcely a year has passed without some contribution to our knowledge of the region. The numerous published articles and maps are listed in the Bibliography and Cartography contained in this volume.

The previously published descriptions are diverse and, almost without exception, concerned with distinct features or problems. The present volume represents the first effort to collect and evaluate all pertinent geologic data for the region.

In a sense which will undoubtedly be appreciated more by future investigators than by the present workers, this volume is of a preliminary character. Some of the problems discussed may be regarded by the individual writers as solved, but it is highly probable that our present conclusions may be set aside as new data, new methods, and new trends of thought develop. Other geologic problems of the region are frankly recognized as unsolved at the present time and such conclusions as are presented are regarded as tentative but in accord with existing data. If certain statements appear especially dogmatic it may be said that they are not so intended. These precautions are suggested for the general reader who cannot be expected to keep abreast of the constant changes in geologic interpretations that are taking place.

Not many decades ago such a report as this would have been prepared by a single author. A local geologist or a geologist sent to examine a certain region may have been able properly to collect,