

**NOTES ON THE GEOLOGY  
OF ONONDAGA  
COUNTY, N.Y.**

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Notes on the Geology of Onondaga County, N.Y. by Philip F. Schneider

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ON THE  
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OF  
Onondaga County, N.Y.

EMBRACING

A short description of the various eras, periods and groups,  
together with statements as to their (1) outcrop,  
(2) thickness, (3) economic importance, (4) fos-  
sils, (5) favorable localities for study.

BY  
PHILIP F. SCHNEIDER.

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## PREFATORY NOTE.

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The following treatise is practically the same as that submitted to the Syracuse University in June, 1893, for the degree of Master of Philosophy.

The work will be found serviceable in locating and identifying the various geological epochs found in this vicinity. The descriptions are not designed to be sufficient in themselves for identifying specimens. They were added simply to give students, doing field work in our county, a list of the more abundant species. We can, however, by knowing the exact localities in which certain periods, groups and layers occur, together with the specimens found in them, practically, although not positively, identify many of the fossils from the descriptions given.

PHILIP F. SCHNEIDER,

SYRACUSE, N. Y., January, 1894.

UPPER SILURIAN.

- 1. NIAGARA PERIOD.
- 2. SALINA PERIOD.
- 3. LOWER HELDERBERG.

- 1. Medina Group.\*
- 2. Clinton Group.
- 3. Niagara Group.
- 1. Red Shale.
- 2. Green Shale.

LOWER DEVONIAN.

- 1. ORISKANY PERIOD.
- 2. CORNIFEROUS.

- 1. Waterlime Group.
- 1. Oriskany Sandstone.
- 1. Onondaga Limestone.
- 2. Corniferous Limestone.

UPPER DEVONIAN.

- 1. HAMILTON PERIOD.
- 2. CHEMUNG PERIOD.
- 3. CATSKILL PERIOD.\*

- 1. Marcellus Shale.
- 2. Hamilton Beds.
- 3. Tully Limestone.
- 4. Genesee Slate.

\*Not found in our county.



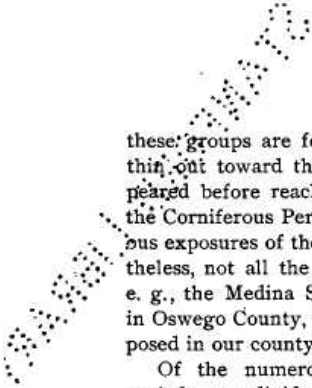
# Geology of Onondaga County, N. Y.

## INTRODUCTION.

Onondaga County, N. Y., presents to the naturalist one of the finest places in the State for the study of geology, and it is doubtful whether we could find another place of like dimensions anywhere in the United States which would present more features of interest. Not only are the rocks presented here extremely regular, but, dipping slightly as they do, we have successively brought to the surface rocks belonging to the Upper Silurian, and to the Lower and Upper Devonian Ages.

The dip of the rock is slightly west of south, and is about twenty-six feet to the mile, while the outcrop extends in a line running nearly east and west. From the preceding statement it will be seen that the dip is not so slight as to present for study only the unbroken line of one formation, neither is it so great as to compel us to draw our conclusions from an insufficient number of facts; for the periods, with one exception, crop out in lateral bands, which are several miles in breadth.

There are seven different periods found in the county, they are: the Niagara, Salina, Lower Helderberg, Oriskany, Corniferous, Hamilton and Chemung. For convenience of description the various geological periods are subdivided into smaller divisions or groups. These groups are more local in distribution and character than are the larger divisions, and consequently we need not be surprised because we do not find in our county all the groups into which these seven periods are divided. Some of



these groups are found to the east of us, but gradually thin out toward the westward, and have entirely disappeared before reaching us, e. g., the Schoharie Grit, of the Corniferous Period. Again, although we have numerous exposures of the Niagara Period in our county, nevertheless, not all the groups composing it are found here, e. g., the Medina Sandstone, although extensively found in Oswego County, just north of us, is nowhere found exposed in our county.

Of the numerous groups into which these seven periods are divided, fourteen are found in Onondaga County. A complete description of each of these groups will be given later, when we speak more particularly concerning the various periods.

The rocks found in our county belong almost entirely to the class known as stratified rocks. Shale, slate, sandstone and limestone, with the various combinations of these, as shaly limestone, calciferous sandstone, etc., form the prevailing kinds of rock. In addition to these, however, we find a vast quantity of drift scattered over the surface of the county, and mixed with its soil. This drift is composed of many large and medium sized bowlders, together with a great deal of fine sand and gravel. In composition it is extremely variable, some of the bowlders are quartzites, others are schistose, others micaceous, etc., but the greater portion are so different from any of the rocks found in place in our county that they must have come from some other source. We also find a great deal of calcareous tufa, or travertine. Not only is this peculiar rock found in many places upon the surface, but in the form of stalactites and stalagmites it also covers the ceilings and floors of those caves found in the county. Marl is another substance that is found to a considerable extent. Many of our lakes are continually depositing it. Serpentine also occurs, although very sparingly. We will speak more

concerning all of these interesting deposits in another portion of our treatise.

In describing the various systems of rocks, we will suppose that we begin our trip in the northeastern part of the county, near Oneida Lake, and by traveling in a southwestern direction we will complete it at the southern boundary, near Skaneateles Lake. Distances, however, will be computed from Syracuse.

Our starting point, at the outlet of Oneida Lake, is about twenty-six feet lower than Syracuse, and is, therefore, 369 feet above tide water. In our trip we will cross the outcrop at nearly right angles. We will first pass over the great level, and after passing a line parallel with the city, we will gradually begin to ascend the hills, while the latter part of our journey will be one constant ascending and descending of hills. The highest elevation which we will find is FABIVS MOUNTAIN, 2,015 feet above tide water.

The scenery of the entire route over which we will pass is extremely picturesque. From the sides of the various hills crystal streams of the purest water trickle down, making the valleys virtually "blossom as the rose." Over the sides of the slopes and down the ravines, dash rapids and cascades of remarkable beauty and size; one of them even competing with the noted Niagara in height of fall. Climbing to the tops of the hills, we will be bountifully repaid for our toil by the beautiful panorama which everywhere meets the eye. It is asserted that from the top of one of the elevations in Pompey seven different counties can be seen.

Our lakes, also, are a source of pardonable pride, and this thesis would be incomplete without a few words concerning some of them. Skaneateles Lake, soon to become the water supply of Syracuse, is a beautiful body of water eighteen miles in length. It has no visible inlet of any size, and its water supply is supposed to be kept up by numerous springs.