

## SCIENCE:

A WEEKLY NEWSPAPER OF ALL THE ARTS AND SCIENCES.

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## INDIAN OCCUPATION OF NEW YORK.

WE have not learned all that will some day be known of the aboriginal occupation of New York, but occasional contributions or systematic statements have a present value. We are thankful for much that has been written, and only wish that more had been done before so many works were obliterated and relics destroyed.

It is quite likely that erroneous estimates have been made in regard to some remains, for fewer occupied spots have been overlooked or forgotten than would be supposed. I have consulted all accessible authorities, certainly the most important, and find less than one hundred and ninety defensive earthworks described or even mentioned, while of stockades which have left traces there are between twenty and thirty. We know that more of the latter were in use, from history; but there are special reasons why the traces of these were fewer than of earthworks. A liberal allowance for undescribed or indefinitely mentioned defensive banks might bring this class of fortifications up to two hundred and fifty, which is probably a fair allowance for the State of New York. It is to be remembered, however, that some have been reported where none existed, and that others have been confused. It is not my purpose now to point these out. With a considerable outlay of field and home work during many years, I have collected notes and collated accounts, so that I have on the map before me a pretty fair view of the field of Indian occupation in New York. In the central part of the State very few sites have escaped my attention, even when small, and this long continued study presents some curious results.

My present intention, however, is merely to show the grouping and nature of the more important known works, although by far the finest articles of stone have come from open villages, hamlets, and camps occupied by early travellers, fishermen, or hunters. The fort builders here had in a measure left the stone age behind them, and stone gouges, gorgets, amulets, and kindred articles, are to be looked for

where camps or unenclosed villages stood. The fort builders preferred working in clay, bone, and horn, using no flint scrapers or drills, and even making stone arrows somewhat sparingly.

When known sites are placed on the map, especially when unimportant ones are eliminated, it will be found that there is a very distinct arrangement in groups, nor does the presence of even small camps change this materially. Hunters, of course, camped on most large streams and lakes, but the rivers had the larger number. Defensive works are oftener at some distance from navigable waters, though having a tendency to the sides of broad valleys. It will be found that some counties present scarcely a trace of settled occupation, while others have them in abundance.

One large group lies in the south-west part of the State, where Cattaraugus County has eleven defensive earthworks mentioned, with others undescribed, and also at least ten burial mounds. Chautauqua has even more abundant remains of this group, having forty-four earthworks and fifteen burial mounds of various kinds. There have been reported also seven ossuaries or bone pits, similar to those found in the Huron country, in Canada. A very few of these defensive works seem to belong to the historic period, containing European relics. With all the descriptions we have of these works, it is a pity that no systematic, and hardly general, report has been made of the articles found, such as has thrown so much light on works further east. In general, the indications seem Iroquoian, though presenting some features of a border land. It is doubtful whether all the works there are of a northern character.

Forming another group, slightly connected with this, Erie County has seventeen earthworks, seven mounds, and four ossuaries. Others have been obliterated before description, but probably not many have escaped mention. The forts are mostly smaller than in the last group. Niagara has three earthworks, six mounds, and four ossuaries. In a general way, the seven earthworks and three mounds of Genesee County may be placed in the same group, and Orleans lies on the border with one earthwork, one ossuary, and traces of works now obliterated. In this group are found many quite recent villages, especially of the Iroquois. Most of the remains, however, are prehistoric, the Eries and Neutrals barely coming in contact with the whites.

In the territory further east, acquired by the Senecas in the seventeenth century, recent villages predominate, but the broad valley of the Genesee has many prehistoric sites, mainly grouped towards the mouth of the river. Monroe County seems to afford twelve earthworks, one recent stockade, and twelve mounds; Livingston County, eight earthworks, one stockade, and twelve mounds, some of these being recent. Wyoming County has one small earthwork and one mound. Ontario County has two earthworks and three stockades, part of both these being recent, as are most of the village sites and burial places. Yates has two earthworks described and some indefinitely reported. One other, planned and described, is evidently erroneous. Tompkins has four earthworks, one in combination with a stockade, and all prehistoric. Allegany has three earthworks and some recent Seneca villages.

Between this and the Cayuga group there is a less distinct line. Seneca County belongs to this, but has but two earthworks described, though reference is made to others by DeWitt Clinton. Wayne has one very small work, in good preservation. Cayuga has five earthworks, part of them recent, and three early stockades. It abounds in recent vil-

lages, whose stockades, if there were such, have left no traces. Strictly, a part of the earthworks in the western part of Onondaga County belong to this, though forming a small group by themselves. For present purposes it is easier to class them with the next.

The Onondaga group, which I have long studied in all its parts, is of high interest. The Elbridge earthworks, to which I have alluded, are all prehistoric, and are allied to another small group towards the Oswego River. These are circular, and between them occurs a small group of circular stockades, near the Seneca River. All are of Iroquoian character, yet very different from the forts of the Onondagas, who settled in the south-east part of the county three hundred years ago. This county affords seven earthworks, eight stockades, and two burial mounds. The earthworks and stockades are both early and recent, the later stockades being generally angular. Part of Madison County belongs to this group, and in this is found the earliest fort of the true Onondagas, occupied about A.D. 1600. Oswego County forms part of the same group, but has few villages. Three earthworks and one mound occurred near the Oswego River.

The Oneidas occupied Madison more than Oneida County, and in the former have been reported one earthwork and five stockades. Some historic forts may have left no traces. There are many recent villages, but few early. Oneida County affords few remains, though there are some early hamlets north of the Mohawk and west of Utica.

The Mohawk group is mainly in Montgomery county, with one large village in Fulton, of about A.D. 1600, one of the two earliest Mohawk towns. In Montgomery there are some early camps and one earthwork. All the villages except the last mentioned are recent, but the traces of their stockades are lost. The earthwork seems barely prehistoric.

The Jefferson County group is strictly prehistoric, and may be compared with the Chautauqua. It seems to have been the early home of the Onondagas, the Mohawks coming from lower down the St. Lawrence. There are thirty-three earthworks, two burial mounds, and six ossuaries, besides obliterated sites. The mounds reported at Perch Lake are foundations of circular lodges.

A smaller group is in St. Lawrence County, where there are eight earthworks, and possibly related to these are a few nearly opposite in Canada. These two small groups, however, are quite a distance apart.

Detached from these groups, Chemung, Chenango, Otsego, Suffolk, and Tioga, have one earthwork each, and Delaware three. Queens has two stockades, and there are historical notices of many stockades along the Hudson, of which no traces remain. Chenango County had one mound, and Franklin two. Columbia and some other counties had stone heaps accumulating within historic times. The remaining counties have sometimes points of archæological interest, but mainly in a minor way.

It must not be supposed that groups of works indicate always a number of contemporaneous villages, though this was sometimes the case. The Hurons, in Canada, had many towns; so had the Eries and Senecas in New York. The Onondagas, however, had generally one large and one small village at a time, and this was the case with the Oneidas. The Mohawks commenced with two, but soon had three or four. These were often removed, and a number of forts will often show the line of a nation's march.

As far as the interior of the State is concerned, early travel followed the valley of the St. Lawrence in the main, often

at a considerable distance from the great lakes and river. The Mohawk valley was little frequented by early travellers. When they reached the west end of Oneida lake, coming eastward, they bore to the north, passing down the St. Lawrence, and sometimes into Lake Champlain. Better fishing and hunting may have caused this. For southern visitors, the Susquehanna afforded a convenient channel, and eventually the tide of Iroquois migration flowed southward through its valley, founding forts in many parts of the Keystone State. A thousand years ago, however, New York may have had few inhabitants, if any, west of the Hudson River Valley, but was a grand resort for fishermen and hunters.

W. M. BEAUCHAMP.

### THE SUPPORT OF MUSEUMS.

THE utilitarian tendency of the American mind and habits of life undoubtedly often stand in the way of that broader culture and advancement, the absence of which in us calls for occasional sneers from our transatlantic cousins. "What is the good of it?" a query which demands an answer setting forth immediate returns that can be expressed in money values or equivalent gain, is too often on the lips of those best able to aid inquiry and research which, for the nonce, appears to have no direct bearing on the physical welfare of mankind.

These thoughts are occasioned by facts that have but recently come to the knowledge of the writer regarding the comparatively very limited means at the command of most of the leading museums of natural history in this country. A gentleman, interested in scientific research, well versed in certain departments, having looked the geographical field over, and coming to the conclusion that certain headwaters of the Amazons at present afford the most unknown and unexplored tropical territory now remaining on the globe, decided to give a year or more of his life to exploration in that field. Willing to cast his lot with the natives, to undergo all forms of deprivation familiar to such travellers, that his expenses might be reduced to a minimum, it seemed to him that there should be no difficulty in obtaining the amount of the bare cost of his journey and the transportation of the trophies and valuables he would be able to gather, from some museum in exchange for his entire collections. In his own case, such credit as he might win by scientific and other publications announcing the facts of his discoveries, was quite all that he cared to ask in return for months, perhaps years, of trial and hardship such as few can appreciate and still fewer are able to endure.

Yet, such is the present impecunious condition of the leading museums in our great cities, that after four months of effort in that direction the would-be explorer has been forced to confess his inability to make arrangements that would enable him to go out under these auspices; and the result must now be, what it has so frequently been before, that his material, with all its wealth of truths for the zoologist, botanist, ethnologist, and physicist, will go to London, Berlin, or Vienna. How much longer are Americans going to allow their self-denying scientific enthusiasts to be thus weaned, in deed if not in mind, from their natural desire to contribute to their home museums the results of their discoveries?

This evil does not cover only the field of foreign travel and research. When sums that many men now consider small to be set aside for an evening's reception or entertainment are not forthcoming in New York to purchase for her museum such treasures as the Grote collection of North