

mode of stating that civilization has not yet reached its highest attainable form."

Mr. C. N. Bell, of Winnipeg, read a paper on "The Mound Builders in Canada."

The scientific journals of the day are over-flowing with articles on the mound builders. Some writers take decided ground in claiming for the builders a remote antiquity, while others are equally positive in asserting that they were the immediate ancestors of our modern Indians. One becomes rather bewildered on finding that prominent champions of the above opposing theories rearrange themselves under different standards when the question arises as to where the Mound Builders came from. While some stoutly maintain that they were an offshoot from Central American stocks, many are confident that they came from the north. An immense number of data are produced as evidence in support of each one of these theories, but one fact seems to have been at least partially overlooked by writers. It is more than passing strange that no systematic attempts have yet been made to follow up towards the north the broad lines of mounds and other earthwork remains left by the mound builders. An immense number of mounds exist in Northern Minnesota and Dakota north of the valley of the Mississippi, and yet little has been done to survey or explore them. Two gentlemen in St. Paul lately informed me that they had surveyed some thousands of mounds in Minnesota, principally, however, south of the source of the Mississippi, but the northern districts were yet virgin soil for the archæologists. Any information therefore that is forthcoming which extends northward the known limits of the mound builders' remains will be extremely interesting and valuable. Comparatively few archæologists are aware of the fact that the Mississippi River mound system merges into one ranging up to Lake Winnipeg, if not farther. In 1867 two of the ordinary burial mounds of the truncated cone form were discovered on the right bank of the Red River in Manitoba, or, as it was then called, the Selkirk settlement. Some interesting remains were taken from them, including human and animal bones and skulls; ornaments of shell, bone and stone; implements of stone, and pottery, all of which (like too many of our Canadian archæological treasures) were exported to enrich foreign museums. Little or no interest was taken in this matter for a num-

ber of years, and it is only lately that the Historical and Scientific Society of Manitoba and private individuals have learned of the rich field for research that lies at their doors. As the country becomes settled, reports flow in of the existence of mounds in different parts of the North-West. It is definitely known that earthworks of various forms are grouped on many of the streams falling into the Red and Assiniboine Rivers, and the announcement was lately made that at least one mound stands at the north end of Lake Winnipeg, or roughly speaking, in N. lat.  $54^{\circ}$ , W. long  $98^{\circ}$ . It may be well to trace one connected line of mounds from down on the Mississippi River to Lake Winnipeg. The Red River of the North takes its rise (by one branch) in Lake Traverse or, roughly speaking, N. lat. 46 degrees, W. long. 97 degrees, and following north falls into the southern end of Lake Winnipeg. There is a connected line of mounds from Lake Traverse to Lake Winnipeg. Lake Traverse is connected by a sluggish creek with Big Stone Lake, which is drained to the south by the Minnesota River, the latter emptying into the Mississippi River, near the city of St. Paul, Minnesota. Mounds are found in numbers along the Minnesota River, from the Mississippi to Big Stone Lake, and there are several groups with an earthwork fortification at the valley situated between Big Stone Lake and Traverse. Hundreds of mounds in this district have been surveyed by Mr. T. H. Lewis, of St. Paul. It will thus be seen that there is a continuous line of mound from the Mississippi, below St. Anthony's Falls, to Lake Winnipeg, following that line of water courses, from the Gulf of Mexico to Hudson's Bay, which divides the North American continent into two great halves, east and west. A brief description of a group of mounds at St. Andrew's, Manitoba, 18 miles north of the city of Winnipeg, will serve to show that in general character they are almost identical with one class of those of the Ohio and Mississippi, as reported on by Messrs. Squier and Davis and other archæologists of the United States. One mound was 8 feet high, 75 feet long, and 65 feet wide. It was covered with a clump of oak trees, ranging up to about 4 feet in circumference, and thickly matted with small underbrush and roots. Under his supervision a trench was sunk from the apex to the base on one side of the centre, and running partially around it. First was encountered a layer of decaying vegetable matter, then the general material was a rich loamy earth, evidently gathered from the immediate vicinity, though

no pits or excavations were found. As the cutting was made patches of charcoal, ashes, and burned clay appeared, mixed irregularly throughout the soil to a depth of four feet. Below this level the ashes and charcoal were more regularly disposed in streaks, and in places the earth seemed to be burned, requiring the use of a pick to loosen it. At this level, also, the remains of some oak timber were uncovered at the west side of the mound, which covered the remains of a human being, interred in a sitting position. The wood was in such a state of decay that it crumbled to dust in the hand, though often showing the lines of fibre and growth, the dust being of a bright red color. In the upper section of 4 feet, amongst the scattered patches of ashes and charcoal mixed through the loam, were found a number of skeletons, evidently "intrusives," as some of them were in a comparatively fair state of preservation, the smaller bones only having disappeared. They had all been buried with the faces upward and were unaccompanied by ornaments or other manufactured articles. It was at once evident to me that they were later interments than the original remains found at the bottom of the mound. There is recorded the fact that during an epidemic of smallpox, about the year 1780, the Indians along the Red River buried their dead in the mounds in this locality, and which were not made by themselves. Without doubt, these "intrusives" found by me were the bodies of the smallpox victims, the Indians departing from their usual mode of scaffold burial to avoid contagion. The late Senator Donald Gunn was informed of this circumstance by an old Indian who had been a resident of the district at the date mentioned. On the level of the natural surface of the ground a platform or layer of round boulder stones was found, beneath a smooth burnt clay floor, apparently dipping lightly towards the centre, which I was unable to uncover at the time, and cannot accurately describe, but it very closely answers the description of the "clay altars" of Squier and Davis. The skeleton of a man of rather above the ordinary stature was found in a sitting position surrounded by several piles or bundles of bones, each surmounted with a skull. These bundles seemed to consist of the main bones and skull of one individual to each pile, and had evidently been brought there for reburial about the central figure. These remains were very much decomposed, crumbling into fragments on exposure to the atmosphere. Some of the bones of the right foot of the sitting skeleton were found in a lump of clay, but these were the

only ones, with the main bones of the legs and arms and skull, which were preserved, though much care and trouble was taken. The skull is now in possession of Dr. Daniel Wilson, of Toronto. These remains were on the level of the surrounding ground on the west side of the mound and facing the east. The following articles were found near the sitting figure. About the position of the breast a polished seashell gorget, probably cut from the *Busycon perversum*. It is four inches in diameter with a circular hole in the centre of one-half inch diameter, and two small holes in the rim for suspension purposes, which show a well worn furrow or groove worn into the shell by the friction of the cord or thong. Like the skull, the gorget is stained with a mineral paint of a red color, but no attempt has been made to engrave designs on its beautifully polished surface. Two well-finished tubes of steatite, each hollowed out and having a raised rim at one end, were taken from about the waist. The tubes show that they were finished inside by cutting, as the stripe left by the tools may be seen. A tiny earthen pot came from the side of the skeleton, but it crumbled to pieces when taken from the earth. It appears to have been filled with red ochre or some such material, as the cup was stained red, and there was a crusted deposit inside. A few shell beads were found scattered through the earth of the lower level. Those secured were very much decomposed, and split into thin scales or crumbled into chalky lime when exposed. The shells of the common mussel, which abound in the river close by, appeared at different levels, but they were generally much decayed. These shells have been found inside pots discovered in the mounds, and were evidently at times used as spoons and ornaments. A few hundred yards from the above mound was another, which has been opened and found to contain human and animal remains, earthen pots, rough stone mauls, deer horns, and a pin or hanging ornament  $5\frac{3}{4}$  inches long and  $\frac{3}{4}$  of an inch thick, formed from the columella of a sea shell, probably of the *Busycon perversum*. This pin is identical with some in the collection of the Smithsonian Institution, notably with one found in a mound in Tennessee. There was also taken from this mound a gorget or breastplate,  $9\frac{1}{2}$  inches long and 3 inches wide, with the ends curved. The material is very dry and brittle, and it is difficult to say exactly what it is, but in all likelihood it is a turtle shell. The marks of a scraper appear on the concave side, while the other is polished smooth and the surface indented with several lines running parallel with its length.

They are not in the form of any particular design. A peculiarity in the construction of this mound was a double layer of limestone flags, separated by a few inches of burnt earth, which was encountered about half way down from the apex, and covering the remains of the original interment at the base. In the vicinity of these mounds, which were situated on a ridge about 500 yards back from the Red River, he found an old camp site, with quantities of "Kitchen-midden," including fragments of pottery, shell and stone heads, partially worked and completely formed arrow heads and scrapers, hammering stones, two stone axes, roughly formed, beaver, buffalo and deer bones, etc. The markings on the pottery were no doubt made by indentation, though in cases the finger-nail marks are discernible. The designs consist of combinations of lines and dots or holes. On comparing the design on one rim fragment taken from the river bank with that on a complete cup taken from a mound within the limits of the city of St Paul, Minnesota, I find that they are almost alike. The materials used in making the pottery were evidently clay, with pulverised shells and decomposed granite, all of which are to be had in abundance in the immediate neighbourhood. A ridge of limestone tapped with drift gravel and boulders here crosses the Red River and supplied raw material for the manufacture of flint implements and weapons. I am unable to learn that any article of European manufacture has been found in the Manitoba mounds. What is strange also is the fact that no article of copper has come to light from these mounds, though, at a distance of 200 miles eastward, on the Rainy River, where a number of mounds have been opened, a majority of the articles found are of that metal, which was probably obtained at Lake Superior, as a direct canoe route from Rainy River leads to opposite Isle Royale where many ancient copper mines have been found. Over 20 mounds have been identified on the banks of the Rainy River, part of them being in the territory of the United States, the river here forming the boundary line between it and Canada. One mound situated at the junction of a southern feeder with the Rainy River is fully 45 feet in height and most likely the largest of the whole mound system. It has been dug into in many places and the large number of relics taken out and carried away and scattered from one end of the country to the other. One mound at the head of Rainy River contained the remains of a structure of logs, about 8 feet square, which showed the action of fire. It had evidently sur-

rounded and covered the original interments. A number of relics were found in this tumulus. But few of the mounds in this region remain intact, and steps should be taken immediately to preserve the small number left. The builders of these mounds were doubtless of a different branch from those of the Red River, and communicated directly with the Mississippi by the streams and lakes which practically form a through canoe route. The country to the direct north of the Rainy River has not been explored, so far as I can learn for mound remains, but the broken character of this section, which is of Laurentian formation, rather inclines me to imagine that none will be found there, because the rule is to find the mounds in the most fertile agricultural districts. Lead, mica, asbestos, gold and silver are found in the rocks of the Lake of the Woods, close at hand to the Rainy River, but there is no record of any of these minerals having been unearthed from the mounds. It is true one piece of ore taken from the hand of a skeleton in the Great Mound has been identified by Dr. Bryce as arsenical iron. Many mounds are situated on the streams flowing from the west into the Red and Assiniboine Rivers, and during this week I have received a communication from a friend who has spent some time in the District of Alberta, in which he stated that "the country is rich in mounds." When it is known that numbers of mounds have been located on the Upper Missouri it is not surprising that they also appear on the streams from the Rockies to the north. Thorough exploration is required to give an exact idea of the geographical areas covered by the northern branches of the mound systems of both the Mississippi and Missouri. That the systems of the Red River and Missouri approach each other closely I proved during the past summer. Groups of the first extend to the headwaters of the Pembina and Souris rivers, which are comparatively close to the Missouri and on the old main trail between the Red River and Missouri, which was the route taken by war parties of the Crees, Assiniboines, and Ojibways from the neighbourhood of Lake Winnipeg, and in more modern times by the Red River half-breed buffalo hunters. Living about Lake Winnipeg, the Mound Builders must have known of the Nelson River, leading directly to tide water in Hudson's Bay, and of the great Saskatchewan flowing from the Rocky Mountains with its northern feeders interlocking with those of the Mackenzie. There is much food for thought and investigation in all this, and the subject is well worthy of consideration as serving

to throw light on important points connected with the peopling of North America—whether the Mound Builders were Indians or a different race of men. The remains of the Mound Builders vary in character and structure in different recognized geographical areas, as, for instance, the pyramidal mounds of the Southern States, the embankments of the Ohio, the stone graves of Tennessee, and the effigies of Wisconsin. It may be taken for granted that even if one race of people with customs in the main identical, climatic influences alone would modify and alter the habits of the Builders. The presence of manufactured seashells in the mounds of Manitoba, which probably came from Southern California or the Gulf of Mexico, will give a clue to the range of the trade. Not only have specimens of the *Busycon perversum* been taken from the mounds on the Red River, but several shells of the *Natica* and *Marginella* appeared in a mound on the Rainy River, a distance of fully 1,500 miles from their native water. The Manitoba Mound Builders probably had some other medium of exchange than copper, which does not seem to have been used then (judging from its total absence so far as now known), and it is extremely probable that the fine fur of the north was sent south to regions which, though possessing a milder climate, were subject to variations of temperature that necessitated the use of warm clothing at certain seasons. In short, fur was no doubt the article exchanged for the sea shells of the south. While agriculture may have been engaged in, and the presence of mounds in the most fertile districts suggests that it was, no traces of stone spades, or “furrowed patches,” such as have been discovered further south, have yet come to light in or near the mounds opened, of which record has been filed. Like the Mandous, the Builders may have used the shoulder-blade of the buffalo as a spade. In a short paper of this kind it is impossible to enter into many details, and I have been compelled to omit many interesting data which have been secured by field work in the North-West.

Mr. J. H. Hunter enquired whether there was any theory in regard to the age of the mounds.

Mr. Bell did not like to offer any. It was very difficult to tell their age. Most mound-diggers have refused to give any date. Much depends on the nature of the soil adjoining them. In the case of trees, the number of rings was not a certain

guide. In regard to the Manitoba mounds, there is sufficient historical evidence that at least 200 years have passed since their erection.

Mr. Browning described some graves he had seen in the North-West, and enquired whether there was any theory as to the mode of burial among the Indians.

Mr. Bell replied that all the northern tribes adopted the scaffold mode of burial. Since the arrival of the whites they have gradually adopted their mode of burial.

Mr. Hunter enquired whether there were any legends connected with them.

Mr. Bell—None whatever.

The President presented the thanks of the meeting to Mr. Bell for his valuable and interesting paper.

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### THIRTEENTH MEETING.

The Thirteenth Meeting was held on 27th February, 1886, the President in the chair.

The following list of Donations and Exchanges was read :

1. Monthly Weather Review, Dominion of Canada, Jan. 1886.
2. Electrical Review, Feb, 20th, '86.
3. Annals of Mathematics, University of Virginia, Vol. II., No. 1, Sept. '85.
4. Journal of the Chemical Society, New York, Vol. VII., No. 10, Dec. '85.
5. The American Naturalist, March, '86.
6. Journal of the Anthropological Institute of Great Britain and Ireland, Vol. 15, No. 3.
7. Proceedings of the Royal Society, Vol. XXXIX., No. 240.
8. The Chemical News, Feb. 12, '86.
9. Cosmos, 8 Février, '86.
10. Rendiconti del Circolo Matematico di Palermo, Marzo 1884, Marzo 1885.
11. Jahresbericht der Geographischen Gesellschaft von Bern, 1884, 1885.
12. Bulletin de la Société Impériale des Naturalistes de Moscou, Tome LXI. Nos. 1 et 2, 1885.
13. Electricité, 6 Février, '86.