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ANNUAL REPORT

OF THE

CANADIAN INSTITUTE,

SESSION 1886-87,

BEING PART OF APPENDIX

TO THE

REPORT OF THE MINISTER OF EDUCATION, ONTARIO,

1887.



Toronto :

PRINTED BY WARWICK & SONS, FRONT ST. WEST.

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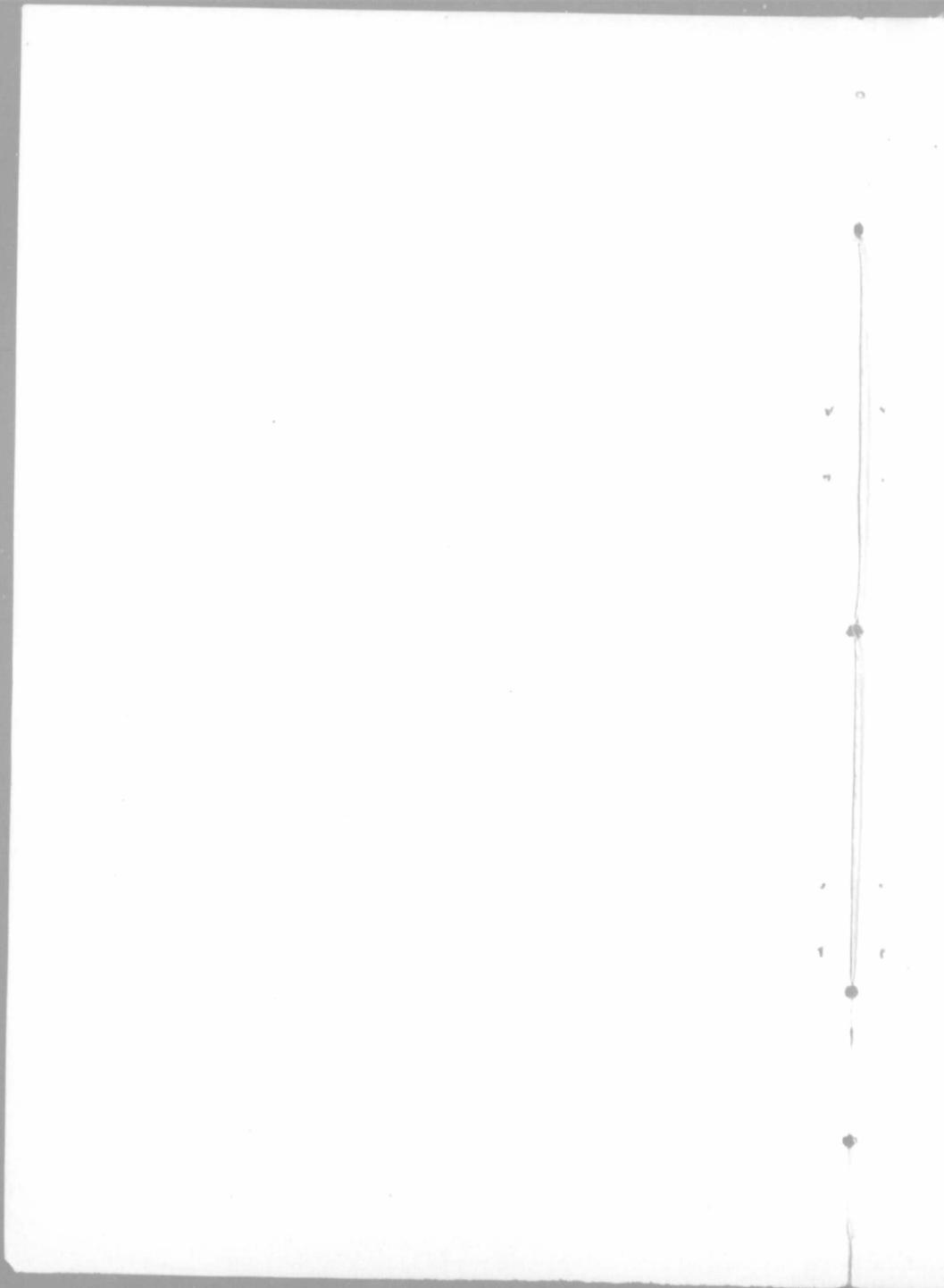
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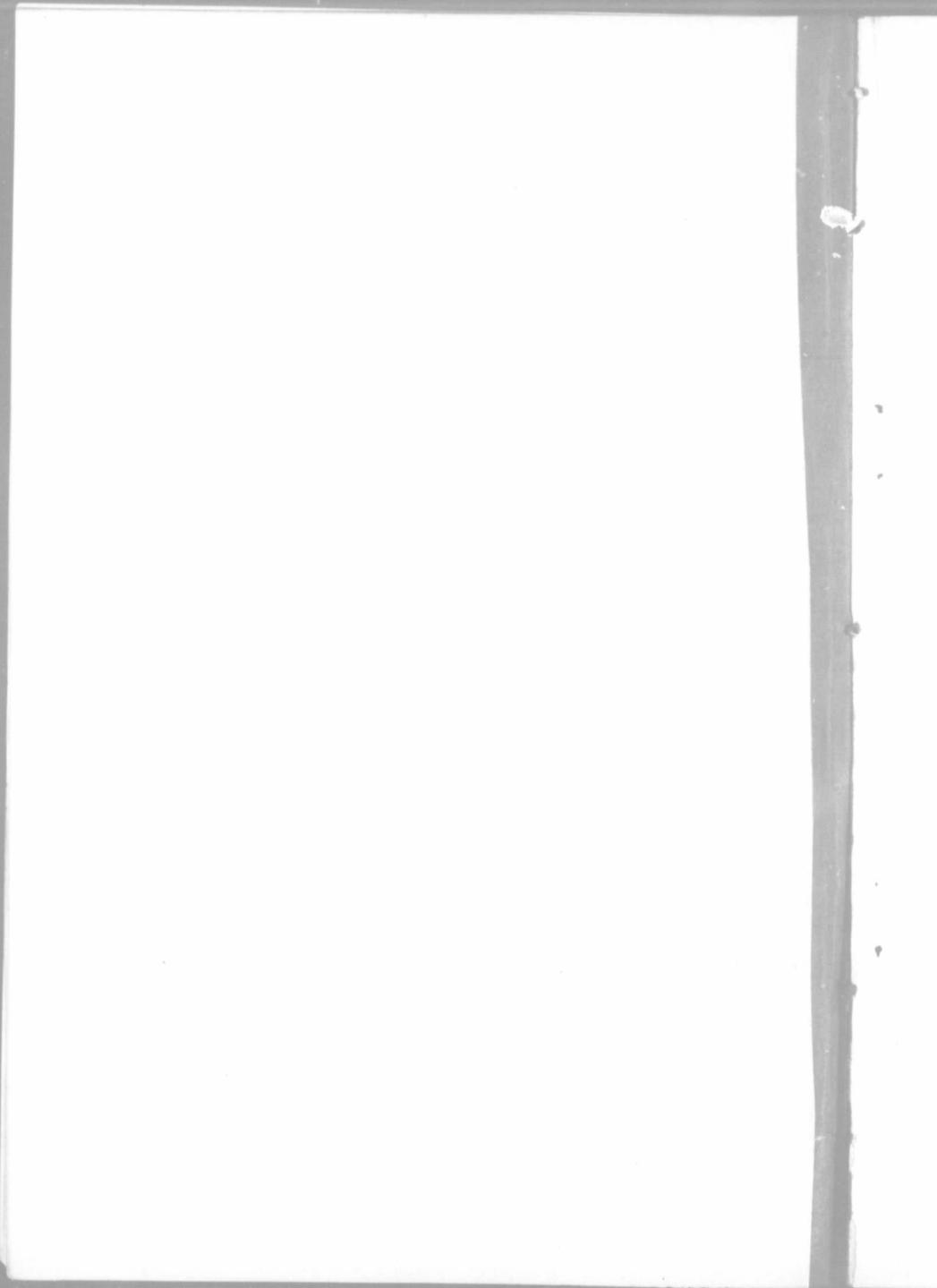
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*ANNUAL REPORT OF THE COUNCIL OF THE CANADIAN INSTITUTE,  
SESSION 1886-87, BEING PART OF APPENDIX L OF THE REPORT  
OF THE MINISTER OF EDUCATION OF 1887. SEE PAGE 235 OF  
THAT REPORT.*

The Council of the Canadian Institute has the honor to lay before the members its thirty-eighth Annual Report.

During the past session twenty-six meetings, including the annual conversazione, have been held, at which forty-nine papers have been read, in addition to twenty-three read at section meetings. This number is largely in excess of that of any previous year in the history of the Institute. The character of these communications is fully equal to the standard of previous years, and the range of subjects (as shown in Appendix VI.) is unprecedentedly large. The average attendance at the regular weekly meetings also shows a considerable and steady increase.

The distinguishing feature of the year has been the successful establishment of no less than four new sections, in addition to the Biological section, incorporated at the end of last session, viz.: (1) A Photographic section, (2) an Architectural section, (3) a Philological section and (4) a Geological and Mining section. The creation of these sections has extended the benefits of the Institute to new classes of the citizens, and has been the chief cause of the large increase of membership. Their annual reports, which are appended, show a gratifying spirit of activity in every branch of the Institute.

A further evidence of this increased activity is seen in the number of memorials presented to the Provincial Government, with successful results in many cases, as follows: In February last the Committee of Ways and Means waited on the Minister of Education and urged him to increase the annual grant to the Institute from \$750 to \$1,500, for general purposes, and to enable the Council to give courses of public lectures on scientific subjects, especially in connection with industrial pursuits. While gratefully acknowledging the increase of the grant to \$1,000 for general purposes, the Council regrets that the Government did not see fit to comply with the latter part of the application.

In the same month the Archaeological Committee urged the Minister to make a yearly grant of \$1,500 for Archaeological research in Ontario, and the passing of an Act for the protection of Archaeological remains founded upon Sir John Lubbock's "Ancient Monuments Act of 1812." The Council again thankfully acknowledges the liberal grant of \$1,000 for this purpose, but regrets that the heavy work falling upon the Minister this session in connection with educational matters should have made it impossible for him to bring in an Ancient Monuments bill, which would have greatly enhanced the value of the Act. It is hoped, however, that such an Act may become law in the next session of the Legislature.

In March a deputation waited on the Commissioner of Crown Lands to urge the establishment of a large park reserve in the district of Nipissing, for the protection of wild animals and of timber, and were assured of the Minister's sympathy. An Act for the purpose will, it is hoped, be the result of this application in the near future.

In April a Committee urged upon the same Minister the propriety of some improved means of collecting information on matters connected with the mining interests of the Province, and received assurances of co-operation.

Another pleasing feature of this year's work is the partial completion of the Museum of Natural History and Archaeology in the third story of our building, which will, it is confidently expected, enable the Council, for some time at least, to properly accommodate

collections and donations. In this direction the Council desires to acknowledge the liberality of the Biological section in guaranteeing the interest for two years on the \$1,000 borrowed for this purpose.

The Library has been increased by the addition of 124 volumes of bound exchanges ; but further shelf accommodation is urgently needed.

While congratulating the Institute on the increase in membership, in income and in activity, the Council feels that it is necessary to impress upon the members the fact that the current expenses are greatly increased, especially in printing and gas, while there is a falling off in the rentals ; and also that, in order properly to fulfil the objects for which it exists, the further extension of the Museum and Library and the completion of the building by the erection of a commodious lecture hall is highly desirable. It therefore urges upon the members the necessity of supporting the present efforts of the Committee of Ways and Means by every means in their power, by contributions, by presenting the claims of the Institute to the public in every possible way, and by endeavoring to obtain new members.

During the past year the Institute has lost by death one of its most distinguished honorary members, the Rev. John McCaul, LL.D., late President of University College, and President of the Institute from 1862 to 1864. The deceased was for nearly half a century one of the leading figures in social and educational affairs in this city, and his articles on Roman Inscriptions in the *Canadian Journal*, which formed the basis of his great work on that subject, had much to do, not only with the establishment of his own claims to be called the first English scholar in Latin epigraphy, but with the high standing attained in those early years by our journal.

(Signed) W. H. VANDER SMISSEN,

President.

ALAN MACDOUGALL,

Secretary.

#### APPENDIX I.

##### *Membership.*

Number of Members April 1st, 1886 .....	233
Withdrawals and deaths during the year .....	14
	219
Elected during the year .....	71
	290
Total members April 1st, 1887 .....	290
Composed of—	
Honorary Members .....	5
Life Members .....	13
Ordinary Members .....	272
	290
Associates .....	30

## APPENDIX II.

*Treasurer in account with the Canadian Institute for the year ending March 31st, 1887.*

## To Summary—

" Balance on hand .....	\$ 63 05
" Annual subscriptions .....	919 00
" Rents .....	218 00
" Government Grant .....	750 00
" Proceeds, Wallace Lectures .....	107 42
" Journals sold .....	29 29
" Periodicals sold .....	32 61
" Mr. Sandford Fleming's proportion of printing .....	62 41
" Interest .....	2 65
" Natural History Society, balance of funds .....	8 73
" Subscriptions to bust of Dr. Wilson .....	25 00
" Proceeds of note discounted .....	300 00
" Proceeds of Mortgage due 1892 .....	3,000 00
	\$5,518 16

## By Summary—

" Salaries .....	\$ 373 50
" Printing Journal .....	338 76
" " Miscellaneous .....	7 50
" Binding .....	124 60
" Stationery .....	32 89
" Postage .....	201 95
" Freight and express charges .....	20 91
" Repairs, stoves .....	4 80
" Gas .....	43 12
" Water .....	24 00
" Show cases for specimens .....	100 00
" Advertising .....	3 00
" Periodicals, 1886 .....	120 36
" " 1885 .....	60 55
" Discount on cheque .....	25
" Consul's certificate and Customs' expenses .....	3 50
" Sweeping chimneys .....	2 00
" Fuel .....	109 90
" Painting .....	104 13
" Interest .....	194 39
" Mortgage due August, 1886 .....	3,411 00
" Taxes .....	10 21
" Bust of Dr. Wilson .....	25 00
" Legal expenses .....	25 00
" City Directory, 1887 .....	3 00
" Repairs to building .....	60 47
" Matting for reading-room .....	26 80

## By Summary—(Continued.)

" Housekeeper's expenses .....	\$ 10 00
" Journals purchased .....	50
" D. Boyle, disbursements and expenses.....	20 17
" Balance, Imperial Bank.....	\$50 00
" " Cash on hand .....	6 40
	<u>56 40</u>
	<u>\$5,518 16</u>

Examined and found correct.

(Signed) T. B. BROWNING, } Auditors.  
D. B. DICK, }

April 22nd, 1887.

*Building Account.*

1886.		
Dec. 1,	To Donation, Natural History section.....	\$ 50 00
1887.		
Jan. 8,	" Mortgage due 1892.....	1,000 00
	" Interest.....	48
		<u>\$1,050 48</u>
1887.		
Feb. 9,	By Law expenses.....	\$ 12 65
	" Carpenters' contract, Certificate No. 1.....	300 00
Mar. 11,	" " " " No. 2.....	75 00
	" Balance, Imperial Bank.....	662 83
		<u>\$1,050 48</u>

Examined and found correct.

(Signed) T. B. BROWNING, } Auditors.  
D. B. DICK, }

22nd April, 1887.

*Assets.*

Building .....	\$11,500 00
Warehouse .....	720 00
Ground.....	3,000 00
Library.....	5,500 00
Specimens .....	1,300 00
Personal property .....	600 00
	<u>\$22,620 00</u>

*Liabilities.*

Mortgage, No. 1, due 1892.....	\$ 3,000 00
" " " " No. 2, ".....	1,000 00
Note discounted .....	300 00
Balance in favour of the Institute.....	18,320 00
	<u>\$22,620 00</u>

## APPENDIX III.

*Donations and Exchanges.*—Books and pamphlets received from April 1st, 1886, to April 1st, 1887 :—From Canada, 190 ; United States, 398 ; Great Britain and Ireland, 310 ; India and Australia, 82 ; all other countries, 1,250 ; total, 2,230.

Total number received in 1882-3, 280 ; ditto 1883-4, 800 ; ditto, 1884-5, 730 ; ditto 1885-6, 1,502 ; ditto 1886-7, 2,230.

## APPENDIX IV.

The number of Societies and Publications with which the Institute exchanges is 341.

## APPENDIX V.

To the Periodicals subscribed for last year, the following have been added :—*English Historical Review*, *Scottish Review*, *Hardwicke's Science, Gossip, Science*. There have been discontinued :—*British Quarterly Review*, *Brain*, *Times (Weekly)*, *English Medicine*, *American Journal of the Medical Sciences*.

## APPENDIX VI.

Classification of Papers read by subjects : General, 3 ; Psychology, 1 ; Archæology, 5 ; Sociology, 2 ; Mathematics, 2 ; Chemistry, 5 ; Mineralogy and Geology, 7 ; Jurisprudence, 1 ; Philology, 8 ; Meteorology, 1 ; Geographical Science, 2 ; Electricity, 1 ; Biology, 5 ; Astronomy, 2 ; Medicine, 2 ; Photography, 1 ; Industrial Science, 1.

Read at Section meetings as follows :—Biological section, 12 ; Architectural section, 8 ; Philological section, 3 ; total, 72.

## REPORTS OF SECTIONS OF THE CANADIAN INSTITUTE, 1886-7.

(1) *Report of the Biological Section from June, 1886, to April, 1887.*

During this period eighteen meetings of the Section have been held, with an average attendance of 18½ (say 19) members.

The Section has 36 ordinary members and 12 associates.

Twelve papers have been read at the meetings, and nine short communications received.

Two of the meetings were set apart for microscopical exhibition and discussion, under the able conduct and superintendence of Professor R. Ramsay Wright.

In June, a branch of the Audubon Society was organized in connection with this Section, and Mr. Hollingworth was appointed local secretary. There are now 106 members in the Toronto branch.

In October, a special vote of thanks was passed to W. H. Doel, J. P., (one of our members) for his earnest efforts, made during the summer, for the protection of insectivorous birds, by fining all violators of the law that were brought before him.

During the same month an offer of the Section to provide the interest for two years on a loan of \$1,000, led the Council of the Institute to decide on at once fitting up the attic of the building as a museum, instead of leasing it to the Art School. Since the completion of the new rooms the members of the Section have assisted in moving the objects and cases from the various places in which they lay to the top of the building.

Signed.

J. B. WILLIAMS,  
Secretary of the Biological Section.

(2) *Report of the Architectural Section.*

In compliance with the constitution of the Canadian Institute, I submit a summary of the work of the Architectural Section.

This Section, consisting of five regular and nineteen associate members of the Canadian Institute, has held eleven meetings since its formation, of which the following is a list:—January 10th, 1887.—Discussion on what style of Architecture is best adapted to this country. January 17th, 1887.—Discussion on the use and abuse of the Romanesque style of Architecture. January 24th, 1887.—Paper on Foundations, by Henry Steele. January 31st, 1887.—Lecture on Wood Floors, by S. G. Curry. February 7th, 1887.—Paper on Style, by J. C. Horwood. February 14th, 1887.—Lecture on Columns, by Alan Macdougall. February 28th, 1887.—Paper on Hints to Young Architects, by Henry Langley. March 7th, 1887.—Lecture on Arches, by W. L. Symons. March 14th, 1887.—Paper on the Doric Temple in its Religious and Artistic aspects, by J. W. Gray. March 21st, 1887.—Receiving the Judges' report on, and discussing the competitive drawings. March 28, 1887.—Paper on Masonry, by A. F. Wickson.

TORONTO, March 30th, 1887.

Signed.

J. P. HYNES,  
Secretary.

(3) *Report of the Photographic Section.*

Report of the working of the Photographic Section of the Institute during the past three months.

The first meeting of the Section for the purpose of organization, election of officers, etc., took place on the evening of February 23rd, 1887, when the following were elected:—Chairman, Mr. H. Neilson; Vice-Chairman, Mr. R. Ewing; Secretary-Treasurer, Mr. A. Gaunt; Executive Committee, Mr. E. R. Parkhurst, Mr. C. F. Wagner, Mr. W. W. Fox, Mr. W. A. Forbes, Mr. F. D. Manchee.

The number of members now on the rolls is 28; associates, 5; total, 33.

Meetings for the transaction of business, etc., have taken place on the first Tuesday in each month, but so far no papers have been read.

The first exhibition of the Section took place in the Library of the Institute on April 12th, and 13th, and was very successful, considering the short time given for the preparation of pictures.

TORONTO, May 4th, 1887.

Signed.

ARTHUR GAUNT,  
Secretary.

*(4) Report of the Philological Section.*

1. The first meeting of the Section was held on March 15th, 1887, when the following officers were elected:—

Chairman, Rev. J. F. McCurdy, Ph.D. ; Vice Chairman, D. R. Keys, B.A. ; Secretary, Geo. E. Shaw, B.A. ; Committee, J. Squair, B.A., M. L. Rouse, J. Cunningham Dunlop, M.A., J. H. Cameron, B.A., W. H. Vander Smissen, M.A., W. H. Huston, M.A.

2. The first two meetings were held on Saturday afternoon (March 5th and 12th), at 16 o'clock, all the subsequent ones on alternate Mondays, beginning March 28th, 1887.

3. The Section has 18 members.

4. The following papers have been read before the Section:—(1) "How we Speak," by A. Hamilton, M.D. (2) "The Science of Language in Popular Education," by Rev. J. F. McCurdy, Ph.D. (3) "Umbrian Inscriptions," by Rev. Neil McNish, D.D., LL.D. All which is respectfully submitted.

Signed.                      GEORGE E. SHAW,  
Secretary.

*(5) Report of the Geological and Mining Section.*

I have the honor to report that, proceeding under authority conferred by the Canadian Institute, a meeting of members was held on the 20th April, ult., when a Geological and Mining Section was duly organized; and that at an adjourned meeting on 30th April regulations and by-laws were adopted, which have since been approved by the Council of the Institute; and that the following officers have been elected for the incoming year:—

W. Hamilton Merritt, Chairman ; Alexander McNabb, Vice Chairman ; Archibald Blue, Secretary ; George T. B. Ives, Assistant Curator ; Messrs. Boyle, Dobson, Notman, Phipps, and Dr. Bryce, Executive Committee.

The first regular monthly meeting of the Section was held on Thursday evening, 5th inst., at which the Chairman gave his inaugural address.

The Section is composed of 15 members.

TORONTO, May 7th, 1887.

Signed.                      A. BLUE,  
Secretary.

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 ARCHÆOLOGICAL REPORT.
 

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*To the President and Council of the Canadian Institute :—*

GENTLEMEN,—I have much pleasure in presenting you with the following report of work done in the Archæological field during the past season—work which it would have been impossible to perform but for the aid rendered to the Institute by the Provincial Legislature at its last session.

As this is the first report of the kind prepared under the auspices of our society, we are warranted in hoping that its appearance will tend to arouse a more general interest in the subject. The brief, illustrated descriptions that follow, of a few typical specimens in our cases, may induce farmers and others to preserve for safe keeping in the Provincial Archæological Museum, which we have established, many such scientifically valuable objects as have, too often, hitherto been lightly esteemed, or neglected and lost.

I have the honor to be,  
Yours respectfully,

DAVID BOYLE,

Curator.

TORONTO, Dec. 20th, 1887.

As soon as the season was well enough advanced to make digging possible, April 30, I visited lot 2, con. 1, township of York, within sight of Toronto. As many interesting relics had been picked up in this neighborhood, it seemed a promising place in which to begin operations.

On the rear of this lot, which is part of the Jackes' estate, is a mound, evidently of artificial formation, although the only indications that remain are disturbed soil and considerable quantities of charcoal and ashes. The situation is high and dry, and the trees close to the mound are comparatively young.

The discovery of two or three fragments of what appeared to be corn-cobs suggested the probability of this earth-heap having been employed by the Indians as a *cache* or deposit for maize.

The whole of the surrounding country abounds in traces of various aboriginal manufactures—flint chips, broken pottery and bone implements—and the Museum of the Institute contains many fine specimens from the same neighborhood, presented by Mr. B. Jackes, of Toronto, Mr. J. Long, of Lansing, and Miss Marshall, teacher of the school section in which the property is situated.

On the 11th of May, I proceeded to Tidd's Island, in the River St. Lawrence, opposite Gananoque, for the purpose of opening a mound on the property of Messrs. Louis Bedard and Lawrence O'Neil, these gentlemen having kindly granted permission to the Institute not only to excavate, but to appropriate anything that might be found.

The island itself lies within a mile of Gananoque, is about half a mile in length, and from one-eighth to one-fourth of a mile wide. Its longer axis corresponds with the course of the river, and the mound in question is near the eastern extremity, but on the south side.

With the assistance of Mr. Bedard and two French-Canadian laborers, a trench was dug from the margin to the centre of the elevation, but with the exception of a few flint-

flakes and some charcoal near the surface, everything went to show that the mound was one of natural formation, the strata of fine and coarse sand reposing on each other undisturbedly.

A little to the north and east of this elevation was another, on the north side of which I observed a promising depression. On examination this mound proved to contain human remains in a very fragmentary condition. The only other relics were a rudely formed pipe-stem of clay and a piece of brown stone, irregularly quadrangular in form, and showing that it had been used for rubbing or polishing purposes. One corner of this stone was coated with oxide of iron, giving rise to a fear that traces of European presence would come to light; but this, I am glad to say, was dispelled by the turning out of a small piece of hematite, which had probably been used as a pigment, and which, no doubt, was accountable for the rust upon the stone.

Openings made in other parts of the mound yielded nothing further.

The most westerly portion of Tidd's Island is owned by Mr. C. A. See, and has been laid out by him as a summer resort, known as Tremont Park. Almost midway between the northern and southern shores and about three hundred feet from the western point, was a circular mound forty feet in diameter, and from four to five feet in height at the crown. Mr. See broke into the mound for the purpose of obtaining building material, and thus accidentally came upon human remains and flint implements.

From Mr. See's account there would seem to have been from twelve to fifteen skeletons within the mound, and these were arranged as if radiating from the centre, with the heads outward and not far from the circumference. Placed over the bones, and especially about the head, were several large, flat stones, near to which were found the implements of flint.

From my own observation it was evident that the bodies had simply been deposited upon the ground, and earth from around the place collected to cover them to the depth already mentioned, and this mode of sepulture was in all probability due to the extreme difficulty of digging beyond the vegetable mould, as the sub-soil at the depth of only a few inches consists of a very compact and tenacious clay.

In the centre of the mound a large quantity of ashes was found, and at the distance of three or four feet south-east was a simple structure about a yard in length, consisting of flat stones set on edge in two rows and covered with other stones, as Mr. See said, "like a drain."

With kind permission from the proprietor, I had a somewhat careful examination made of such portions of this mound as had not been disturbed, and I succeeded in procuring several enormous flint implements similar to those already found by Mr. See. I was also abundantly rewarded by finding a number of native-copper beads—in one instance they were still adherent to the hide or skin they had been employed to ornament.

Mr. See having presented the largest and best pieces of his "find" to the Institute, our cases now contain (including those found by myself) from this mound ten spear-like implements, mostly of great size—some of them upwards of 9 in. long and half as wide; one awl-like tool, two conical pendants (slate), two other perforated stones, a number of copper beads, and a copper axe.

A brief visit to Hay Island, half a mile south-west of Tidd's, enabled me to procure from Mr. De Witta, the proprietor, a fair specimen of celt, and a promise to preserve for the Institute all further "finds."

There is little reason to doubt that these islands lie in what was a well-travelled route across our great river by the ferocious members of that remarkable confederation in connection with whom, indeed, for long time the St. Lawrence was known as The River of the Iroquois. The valley of the Gananoque leads into the very heart of a country remarkable for the number of its lakes—a country the superior of which it would be difficult to imagine for hunting and fishing purposes, and one that was undoubtedly visited annually at least, by the warriors of the Six Nations.

Thanks are due to Messrs. W. T. K. Smellie, B.A., Head Master of Gananoque High School, Paterson, his assistant, L. Bedard, L. O'Neil and C. A. See, for the

many courtesies extended by them to the representative of the Institute, and more especially to the last named gentleman for his donation of specimens.

On the 20th May, accompanied by Mr. Jas. Bain, Jr., City Librarian-in-Chief, and A. Cox, A.R.C.A., I visited the Township of Beverly, in response to an invitation from Mr. Wallace McDonald, Clerk of the Township. The object of this visit was to examine the site of an old palisaded fort, or encampment, on the farm of Mr. Wm. Gilbert, lot 26, con. 8.

Mr. McDonald remembers distinctly being able to trace a circular series of post holes in the field when cleared, upwards of 40 years ago. Not only were they apparent on account of the decayed wood they contained, but they became disagreeably noticeable on account of the frequent stumblings they caused to ploughing teams.

Mr. McDonald had preceded us to the ground and planted flags as nearly as possible to correspond with the outline of the enclosure. The accuracy of Mr. McDonald's memory was proven by the fact that after having had a portion of the marked ground ploughed from side to side, and the loose earth carefully removed with spades, we found unmistakable evidences of the old palisades. Only a few decayed fragments of wood were found, but sufficient to prove that the posts were pine; and the discoloration of the earth caused by the subsidence of the vegetable mould into the old cavities of the lighter colored sub-soil, indicated that the stakes had been from four to six inches in diameter, and about the same distance apart. The enclosed space was almost circular, being 180 yards in diameter from east to west, and 140 yards from north to south.

As we were assured by Mr. McDonald that not fewer than 300 iron tomahawks had been ploughed up in the same field, the probability is that the enclosure was of early French origin.

The enclosure was on a plateau about 12 feet above the level of a small stream a short distance to the west, and nearly forty yards from a pool on the east, the situation and surroundings of which are so peculiar as to suggest human design in the arrangement of the embankments, although our excavations, made to the depth of fully six feet, failed to afford any proof to that effect.

Your representatives were deeply indebted to Mr. Jos. A. Smith, Public School Inspector of Wentworth County, for the valuable assistance rendered to them in various ways during their visit—to Mr. McDonald, for his active sympathy and intelligent co-operation—to Mrs. Gilbert and the Messrs. Gilbert, proprietors of the farm, and to Miss Robertson, teacher, for the extension of many courtesies.

The 9th and 10th of June I spent in the Township of Humberstone, a few miles east of Port Colborne, where, from information furnished me by Miss Emma Crosson, teacher, I was led to understand that an ossuary had been discovered a short time previously. The same young lady also presented the Institute with three well-preserved skulls from the burial place in question.

I was fortunate enough to become acquainted with Mr. Cyrenius Bearse, of Sherkston, himself an enthusiastic amateur in Archeology, and he kindly accompanied me to the spot in question, within a short distance of the Lake Erie shore.

The ossuary was found to occupy a position almost in the centre of a piece of low lying ground, about ten acres in extent, and nearly surrounded by a ridge of sand hills from 20 to 30 feet high.

Owing to the promiscuous way in which the bones lay, it was well nigh impossible to estimate how many skeletons had been deposited, but the number was probably not far from fifty. Notwithstanding the Indian mode of burial, many of the skulls seem to be those of whites, but until proper measurements have been made nothing on this point can be stated with certainty.

I was informed that a fine stone pipe had been taken from near the margin of the pit, and was in the possession of Mr. Carroll, of Buffalo, whose men are here engaged in shipping sand to that city.

The low situation of this ossuary, in the immediate neighborhood of such heights as the aborigines usually selected for places of permanent sepulture would, of itself, suffice to raise doubts as to the work having been of purely Indian origin. I am of opinion

that much may yet be learned from an examination of the surrounding sand hills, and hope, next season, with the permission of Mr. Carroll, to spend a few days in exploring them somewhat thoroughly.

Heaps of flint flakes occur frequently along the lake shore, and highly finished stone implements of various kinds are often found on farms in the vicinity. From Mr. C. Bearse I procured a vessel of clay (Fig. 7), an exceedingly fine stone gouge, and a number of other articles. From Mr. Wilson, a neighbor of his, and nearer the lake shore, I received a peculiarly formed spade-like specimen, the use of which it is not easy to divine.—(Fig. 40)

The Institute is indebted to Mr. Bearse for much valuable assistance on this occasion.

Within easy distance of Toronto is the Village of Lambton Mills, on the River Humber. This locality has long been noted as one rich in Indian relics. An old trail to Lake Simcoe and the Georgian Bay followed the valley of this river for a good many miles, and here and there throughout its course are found indications of the old encampments and potteries.

A little south of Lambton Mills, on the Baby Estate, there must have been at one time a considerable Indian population of a stationary character as it was possible for the nature and habits of the aborigines to permit.

On the summit of a club-shaped plateau, having an area of about ten acres, and being fully one hundred feet above the bed of the Humber, a number of native burial pits have been opened at various times, and much valuable material taken from them. It is quite certain that when this portion of the farm is freed from underbrush further interesting discoveries will be made.

On the flats to the south of this elevation, and facing the Baby residence, Mr. Raymond Baby pointed out a camping ground, or village site, as indicated by remains still turned up by the plough, and I am quite sure that inspection of the corresponding flats to the north would reveal even more numerous proofs of old time habitation.

As somewhat akin to our subject, it may be stated that the Messrs. Baby have in their possession a deed of gift of land in and about Detroit, made to their grandfather by the Pottawatamie Indians in the year 1780 and attested by "A. S. De Peyster, Major, King's Regiment," the officer then commanding the British troops in the town; but to us the most interesting fact connected with this document is that it bears the totem signatures of the several chiefs who represented the tribes concerned.

Mr. and Mrs. R. Baby did everything possible to further the views of the Institute, and expressed their intention to give our Society due notice of any local archaeological developments.

Mr. Jas. Bain, Treasurer of the Institute, accompanied me on June 29th to the Township of Nottawasaga. Here we spent four days in visiting and examining various village sites and ossuaries that want of time had prevented being done on a previous occasion—last year.

Apart from historic knowledge there is abundant evidence that this was at one time a populous Indian section. On many of the principal elevations are found the old pit-graves or ossuaries so characteristic of our Indian sepulture, and the higher lands contiguous to the streams afford ample proof of former encampments and village sites.

The people (of the Tobacco Nation) who occupied this portion of the country appear to have devoted themselves in a large measure to manufacturing clay pots, pipes, bone implements and beads for trading purposes with other tribes less ingenious, or more nomadic, who would willingly exchange the result of the chase for coveted articles of utility or ornament.

We were particularly fortunate in finding on the north half of lot 13, concession 7, the property of Mr. Robert Loughhead, a number of exceedingly valuable specimens of shell and of red stone on which some work has been expended preparatory to the making of beads. These pieces are of especial value as indicating to us the laborious methods adopted to produce symmetrical forms from rough and obdurate material. Further reference will be made to this subject in the sequel.

Excavations made in a few ossuaries did not yield many relics, as in nearly every case openings had been made previously by the settlers, either out of mere curiosity or for the purpose of securing the copper or brass kettles that are so frequently found in graves of post-French date.

On the farm of Mr. Ed. Beecroft, lot 19, concession 8, an ossuary was opened a number of years ago, in which it was estimated that not fewer than 1,000 bodies had been deposited.

From Mrs. Beecroft we obtained an exceedingly peculiar object formed of catlinite (see fig. 27). The arrangement of the holes suggests its use as a pipe, but I am unable to convince myself that this oddly formed piece of workmanship did not serve some other purpose. It was taken from the ossuary already mentioned on the property about forty years, and had been in possession of Mrs. Beecroft the whole of that time. Iron tomahawks bearing the French stamp are plentiful in the township.

From Mrs. Adam, of Creemore, and from Mr. Rt. Lougheed, Mr. John Hannah and Mr. Jas. Connor, of Glen Huron, we received a number of good specimens. Special thanks are also due to Masters Herbert and Theophilus Connor, sons of the last-named gentleman, for a donation of one stone pipe and three clay ones, all bearing good imitations of human faces.

The Institute was formerly indebted to Mr. Lougheed for a great many relics that had been collected by himself and sons on the farm for a number of years.

Wm. Smith, Esq., and Mrs. Smith, of Smithdale, were particularly obliging to the representatives of the Institute, and did all in their power to make our visit both pleasant and profitable.

In July I paid a brief visit to the Tuscarora Reserve in the County of Brant.

On application to Col. J. T. Gilkison, Indian Superintendent and Commissioner, that gentleman kindly permitted Chief Smith (De ka-nen-ra-neh), his assistant, to accompany us to the reserve, and to act as interpreter. Mr. Thos. Whitehead, a public school teacher from Sheffield, England, formed one of our party.

Having driven to the farm of Chief Bucke (Ska-na-wa-tih), about twelve miles southwest of the City of Brantford, the presence of the assistant superintendent secured for us a hearty welcome from the aged "Fire-Keeper" and two of his companions, all of whom were pagans and members of the Mohawk tribe.

Ska-na-wa-tih, as "Fire-Keeper" of the tribe, has entrusted to his care the wampum belts which fell to the share of the Mohawks when they abandoned their ancient hunting grounds in New York and separated from the other tribes that formed the remarkable confederacy so well known in the history of our continent as "The Six Nations," to settle on the banks of the Grand River, under the protection of the old flag.

On the announcement of our object by Chief Smith, Ska-na-wa-tih immediately consented to display his archives and give us their explanation.

Amid a clump of fruit-trees, not far from his log-house, the old chief having spread a white sheet on the ground, we seated ourselves on the grass and listened eagerly to his recital, as interpreted by Mr. Smith, of the various compacts and treaties formed between different Indian tribes, and between Whites and Indians, as recorded by the arrangement of the beads or wampum woven into belts.

Full particulars relating to these extremely interesting "documents" may be learned by reference to Hale's "Iroquois Book of Rites," where the reader will gather much more information than he could from the Indians themselves.

Nothing could exceed the courtesy of assistant superintendent, Chief Smith, who exerted himself to the utmost to forward the aims of the Institute.

Early in October I examined what, from its surroundings and the regularity of its form, was supposed by the people in the neighborhood to be a mound, on a farm near the village of Troy, in the township of Beverly.

The first view of the situation was enough to throw extreme doubt upon the probability of the earth-heap in question being a genuine "mound," and closer examination enabled me to conclude that not Archaeology but Geology must answer the question: How came this elevation here?

Owing to a rain, that lasted during the greater part of my stay in this locality, little could be done in the way of digging. Without any doubt, this township is well worthy of a thorough examination, notwithstanding the immense quantities of material that have already been taken from it to the cases of the most celebrated museums in Europe and America.

Our collection is even now under deep obligations to Messrs. McDonald, Dwyer, Rae, McKnight, McQueen and others for specimens presented on frequent occasions since the Institute undertook the work of investigation in this direction.

Should opportunity serve next season, I think it would be well to make an exhaustive survey of the whole township and of some adjacent townships, as that section of country is extremely interesting from an historical as well as from an archaeological point of view.

Before leaving the township on this occasion I was enabled to procure from Mr. W. Humphrey a remarkably fine copper chisel. It was found on Mr. Humphrey's farm, lot 6, con. 2, and is one of the finest specimens in our somewhat meagre collection of copper implements.

Mr. E. Clement rendered valuable service by way of furnishing information and affording facilities to reach some out-of-the-way places.

Towards the end of the same month I took the opportunity of visiting Komoka from the neighborhood of which we last year received about seventy flint weapons found on the farm of Mr. Arthur Seabrook. Here, as in many other places, the bluffs along the river banks afford many evidences of aboriginal life. In the townships of Delaware and Caradoc large numbers of Indian relics have been found. As in Beverly and some other localities, there is here plenty of encouragement to make a detailed examination of the whole ground.

At Strathroy I had the pleasure of examining the collection of Mr. Jos. W. Stewart. This gentleman has been an enthusiastic collector for several years, and his occupation having afforded him opportunities to travel over much of the Province, he was enabled (with the exercise of judgment and good taste) to form a cabinet of nearly six hundred specimens, nearly all of which are among the best of their kind procurable.

On representing to Mr. Stewart the claims of the Canadian Institute to be made the repository of so many fine specimens, he ultimately consented to part with them, and they now form a valuable addition to our museum. Further reference will be made to some of these relics in what follows.

The thanks of the Institute are due to Mr. Joseph S. Carson, Public School Inspector of West Middlesex, for the assistance he rendered to your representative on the occasion of this visit.

Although where there is so much to be done, I have accomplished less than I could wish, still a good beginning has been made and a great deal of valuable information has been gleaned for future use.

By means of exploration, donation and purchase, upwards of eight hundred specimens have been added to our collection during the year.

Of course, but for the small appropriation made by the Provincial Legislature last session, it would have been absolutely impossible to do even the little that has been done; and it must be gratifying to know that at least a beginning has been made by way of providing the future student of history, ethnology and archaeology with a store of material and facts relating to our own province that will be available for reference in the chief centre of our educational institutions.

It is extremely desirable that there should be prepared a map of the province, showing the state of our knowledge with regard to aboriginal settlements, battle-grounds, favored places for the making of pottery, flint and other stone implements, bone needles, awls and hooks, stone and shell beads, (wampum) etc.

This map should also show all the principal trails and portages connecting our northern and southern waters, and as many of the minor routes as possible. In a large number of localities nearly every trace of these has been obliterated in the process of

settlement, but there are still living, pioneers who have a distinct enough recollection of the old paths. In other instances, the trails remain clearly traceable, and a record of them should be made at once.

It is also desirable that as full a list as possible should be made of all Indian topographical names, with their significations. In too many instances these have been displaced either by local vulgarities or by European anomalies.

These original Indian names would, as a matter of course, find a place on the map referred to.

In connection with the circular issued by the Institute at the beginning of the year, it may be stated that a large amount of important information has been procured from various parts of the country in response to the request for donations, as well as in reply to the following queries:—

1. Is there any mound, tumulus, or intrenchment in your neighborhood?
2. Are there any elevations which, from their regularity or for any other reason, suggest an artificial origin?
3. What are the dimensions and area of these from actual measurement? If possible, give a plan with sections.
4. What are the physical features of the situation and vicinity?
5. Are there any evidences of the place having been surrounded with posts or pickets?
6. Are there still, or were there before "clearing," trees of large size within the area of the work? If so, state kind and size, also number of annual growth-rings on largest stump.
7. Are stone or bone weapons of any kind, or fragments of pottery ploughed up in the neighborhood?
8. Have any copper implements of native manufacture been discovered? What?
9. Have any iron or copper articles been found indicating intercourse with Europeans? What?
10. Are there any local names of Indian origin in your township or neighborhood? If so, kindly make a list of them, indicating their correct pronunciation, stating their meaning, and the local or traditional circumstances from which they originate.
11. Names of Township and County, and numbers of lot and concession in which any mound, ossuary, intrenchment, old village site, or battle-ground exists.
12. Name of any local collector of Indian relics, or of any persons who are interested in Canadian Archaeology.

As a rule, farmers and others having in their possession single or several specimens, willingly present them for the purpose of being placed in a public collection, but, as might naturally be expected, amateur collectors are very loath to part with their "treasures."

The publicity which has been given to the project of the Institute, owing to the distribution of its circulars, and the friendly notices that have appeared in many newspapers, will, to a very considerable extent, prevent mercenary transactions in Indian relics for disposal beyond the province, and there is good reason to believe that many of the private collections just referred to will ultimately, by presentation or purchase, form a part of the Provincial Museum.

It is hoped that the following brief references to a few of the typical specimens in our cases will not only aid in arousing more general interest in the subject, but may enable many of our young people either to collect for themselves more intelligently, or simply to preserve from utter loss such objects as have hitherto not been deemed to possess any scientific value.

Although it is a little more than three hundred and fifty years since Canada became known to Europeans, and considerably less than that since the greater portion of this province afforded homes to pioneer settlers from the Old World, our knowledge of aboriginal life-history here is, in many respects, surprisingly deficient.

From living descendants of the old race nothing satisfactory can be gleaned. The traditions they possess, and which are mainly fabulous as a matter of course, contain little or nothing that affords any clue either as to the manner in which their ornaments, utensils and implements were produced, or the uses to which many of these articles were put. Neither do we gather as much as is desirable on these points from the writings of those who had good opportunities to examine and describe during the early periods of European settlement.

With regard, therefore, to objects that compose almost every archaeological collection worthy of the name, it may be said of many that, whether as to the processes by which they were fashioned, or as to their ultimate applications in savage economy, we are almost totally ignorant.

Aboriginal relics may be conveniently classified thus :—

- 1st. Those of which we know the mode of production and their uses, *e. g.*, arrow heads.
- 2nd. Those of which we know the mode of production, but are uncertain as to the use, *e. g.*, so-called breast-plates, and banner stones.
- 3rd. Those of which we know the use, but not the mode of production, *e. g.*, certain kinds of finely drilled beads.
- 4th. Those of which we know absolutely nothing.

European aboriginal relics are classified as paleolithic or neolithic, according to their degree of finish, the latter being of more recent origin and of superior workmanship. In this country, however, no such distinction can be made, for we find the rude and the more elaborate forms in various degrees of finish, in such circumstances as to indicate that all were made and used by the same people contemporaneously.

Many of the more elaborately formed and highly finished were, no doubt, for ceremonial, or, as we would say, for holiday use, the material and construction precluding any belief that economic utility was a consideration with the makers.

Again, many of the weapons we agree to call by specific names were, in all probability, applied to a variety of uses. Just as the dexterous backwoodsman finds in his trusty jack-knife a chisel, a spoke-shave, a scraper, a bit or gimlet, and even a saw, the Indian had in his spear or arrow-head that which would serve a variety of purposes. With the same weapon that slew his prey, he could skin the animal and cut it up. For excising a scalp, cutting thongs, severing a twig, smoothing handles or boring holes, his flint weapon would answer admirably.

A weapon found in considerable abundance is known as a "skinning knife." No doubt the article in question may have been employed in the manner indicated by this name, but it is quite certain that the main purpose of such instruments was warlike. They were chiefly used as tomahawks, or battle-axes, having been attached to handles by means of sinews or thongs. They are invariably made decreasing slightly in size from the edge to the head, so that when bound to a handle every blow administered would tend to tighten their hold. Occasionally these are found of exquisite finish, being perfectly symmetrical and highly polished.

It seems to be very evident that certain persons in each tribe devoted their time in great measure to the manufacture of implements which they no doubt gladly exchanged with others possessing less mechanical ability for the results of the chase, but we have no means of ascertaining the comparative values placed upon the various articles.

To the women, in all likelihood, was allotted the making of earthen vessels, fragments of which are of such frequent occurrence here and there all over the Province, and it must be acknowledged that they evinced considerable taste in modelling and ornamenting their pottery. Unlike the process of building in a coil, as employed by some of the more

southern tribes, the natives of this country appear to have shaped their vessels from the clay in lump form, tempering the material either with powdered shells or with stones of granitic formation, calcined and finely pounded. Wherever the latter material has been employed particles of mica are distinguishable on the surface. In outline and ornamentation many of the vessels in question prove very clearly that the ancient red-man had an eye for the beautiful. Unfortunately, whole specimens of pottery are seldom found unless in the form of pipes, but the fragments frequently enable us to arrive at a pretty correct idea of the size, outline and appearance of the Indian potter's handiwork.

It is probable that the men fashioned their own pipes in material of whatever kind, and one cannot help admiring the taste that is often displayed, as well as the fertility of resource in the adaptation of animal and other forms to the intended purpose.

Presumably, also, most of the other objects requiring peculiar mechanical skill were produced by the male members of the tribe, although there is little doubt that many operations, such as the preparing of skins, the weaving of mats and baskets, and the making of moccasins and other articles of clothing, devolved mainly on the women. As dyers, too, the women were expert in the production of brilliant colours from the many vegetable juices found in the virgin forest.

In material, shape or design there is little or nothing to distinguish the work of one tribe or nation from that of another, except in the case of nations that are separated by long distances. The widely flared or trumpet-mouthed pipe-head would seem to have been a favourite Huron form, but it is by no means confined to the territory that was occupied by that people. In all the chief characteristics of aboriginal life, judging from relics now brought to light, there would appear to have been scarcely any difference among the tribes that inhabited this portion of Canada.

The principal materials employed by the Indians in the production of utensils, tools, weapons and ornaments were clay, shells, flint, quartzite, slate, steatite, blood-stone or catlinite, bone, horn and (rarely) copper.

Not only are all the implements and utensils similarly fashioned and from the same kinds of material, but we find that wherever it was possible the crown of some bluff near a stream was selected as camping ground, and in like manner the highest ground was preferred for purposes of interment.

It frequently happens that the number and arrangement of ash-heaps in a field enable us to form a fair estimate not only as to the number of "lodges" that composed a village, but as to the number of "fires" or families in each lodge.

In a field on the farm of Mr. Robert Loughheed, near Glen Huron station, in the Township of Nottawasaga, the extent of a village is thus plainly discernible and indicates the former existence on the site of about fifty lodges, each affording shelter to from three to seven families. An examination of this field by Mr. Loughheed's family, and by members of the Institute, was the means of adding upwards of one hundred excellent specimens to our cabinets.

In a few places there seem to have been attempts made at fortification by means of earthworks and palisades, but it is difficult to determine how far these means of defence may or may not be due to European influence, as in almost every instance where evidences of such structures exist, there are found iron tomahawks, brass kettles, glass beads and other indications of the white man's presence.

Yours respectfully,

DAVID BOYLE.

## POTTERY.

From clay, tempered with powdered shells or granite, were formed vessels for cooking purposes or for holding water. These are seldom found entire, but from the fragments that are picked up, it is evident that utensils of this kind were sometimes upwards of a foot in diameter and about as deep. Some appear to have been moulded and baked within rudely woven basket-work—others show no sign of having been formed in this way, but are, on the contrary, graceful in form and tastefully ornamented with patterns usually made up of straight lines and dots.

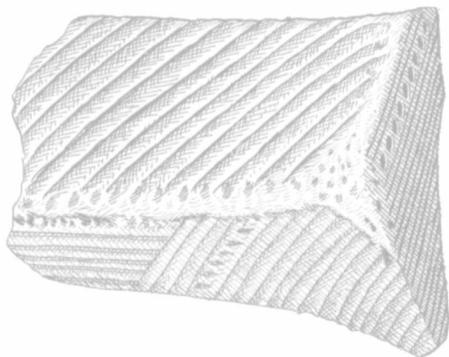


FIG. 1. (Full Size.)

Fig. 1 shows plain lining, but is remarkable as forming almost right angles on the side and edge.

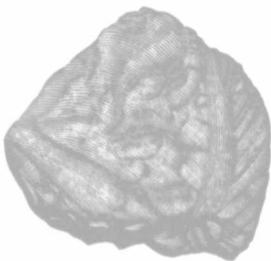


FIG. 2. (Full Size.)

Fig. 2 shows a peculiarly symmetrical arrangement of elliptical depressions within a triangular panel. This arrangement of markings is very peculiar, but, unfortunately, the cut does not show it at all clearly.



FIG. 3. (Full Size.)

Figs. 3 and 4 exhibit what may be regarded as common styles of marking, but, in Figs. 5 and 6 there is a very noticeable variation. The holes shown at the top of Fig. 5 do not penetrate the pottery. They have been made with a blunt-pointed instrument



FIG. 4. (Full Size.)

from the inside in such a manner as to form corresponding bosses, or swellings, on the outside, as at Fig. 6. Both pieces are fragments of the same vessel, and were presented by Mr. George Laidlaw, of "The Fort," having been found by him near Balsam Lake.

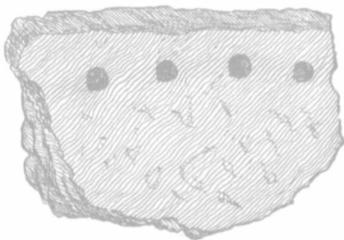


FIG. 5. (Full Size.)

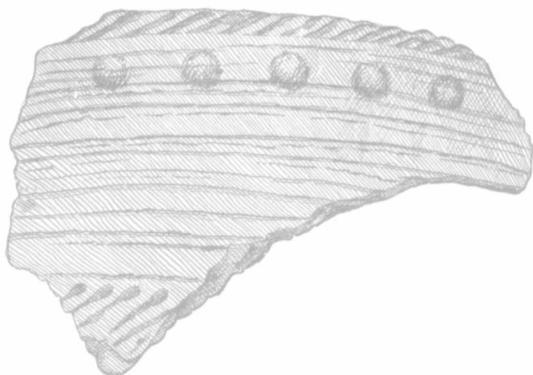


FIG. 6. (Full Size.)

In every instance the clay vessels are round bottomed, and this seems the more singular in the case of those that are formed, as is supposed, without the aid of any enclosing wicker.

FIG. 7. ( $\frac{1}{4}$  Size.)\*

Fig. 7 is an almost perfect, but somewhat rudely-formed clay pot, from the Erie shore east of Port Colborne, where it was found, projecting from a sandbank, by Mr. Cyrenius Bearse.

\* " $\frac{1}{4}$  size" means that the cut is only half as long and half as wide as the object. "1-16" one-fourth as long and one-fourth as wide.



FIG. 8. (Full Size.)

Fig. 8, though less in size, is more elegantly formed, and shows more taste in its ornamentation. It was found in an ossuary on the farm of Mr. James Dwyer, Beverly—a former habitat of the Neuters. From the same place we have been able at various times, by the generosity of the proprietor, to add many fine specimens to our collection.

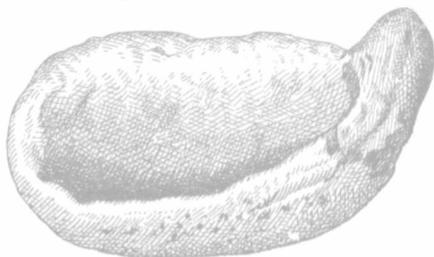


FIG. 9. (Full Size.)

Fig. 9 is a coarsely formed specimen of the potter's art from Beverly. It may have been used as a spoon, but more probably was a child's plaything. Pipes and other articles are sometimes found of such diminutive size as to preclude the belief that they were made for any other purpose than that of toys. In a few cases, perhaps, they were used as articles of adornment, and this seems the more likely when we find them perforated as if for suspension.

Our collection is very weak in this department, and particular attention should be devoted to the securing of good, perfect specimens of the potter's handiwork.

Of clay pipes we have been successful in procuring a fair variety, but many of them are the property of the York Pioneers, and are merely in the temporary keeping of the Institute.

## CLAY PIPES.

On this class of workmanship the Indian has employed his best talents as a mechanic and an artist. As mentioned elsewhere, the flared, flanged or trumpet-mouthed form was in considerable repute, but the adaptations of design to human and lower animal forms are frequently very ingenious and sometimes amusing.



FIG. 10. (Full Size.)

Fig. 10 may be taken as a typical illustration of what, from the frequency of its appearance in the neighborhood of the Georgian Bay, is sometimes spoken of as "The Huron Pipe," although many of them have a sharper and longer outward curve, giving the mouth a broad, flattened look.

The specimen figured is from the farm of Mr. James Rae, Beverly township, a considerable distance from the ground occupied by the Hurons.

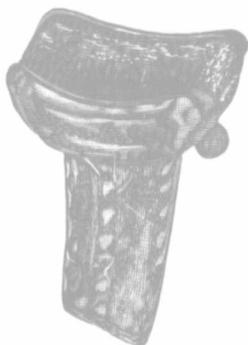


FIG. 11. (Full Size.)

In Fig. 11 we have the flared mouth modified in such a manner as to give the outside a quadrangular form. The lower part of the bowl is relieved by means of

four ribs, that give it the appearance of a square, whose angles correspond with the sides that form the mouth. This is a very unusual combination of design. Our collection contains a few other specimens. Both are from the Loughheed farm, township of Nottawasaga. Some pipes of this shape have been found at Lake Medad, near Waterdown.

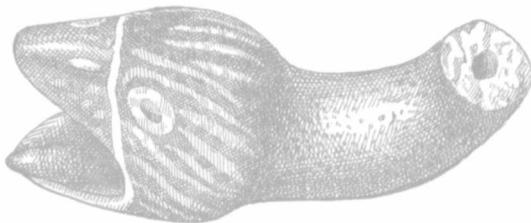


FIG. 12. (Full Size.)

From the same ground we have Fig. 12, of very graceful design; the open mouth of the snake forming the bowl of the pipe. Unfortunately, the stem is broken, but it was probably not more than an inch or two longer when complete.



FIG. 13. (Full Size.)

In Fig. 13 it has been the evident intention of the aboriginal artificer to produce the semblance of an owl. The stem is lost, and the beak has been destroyed, but enough remains to prove that the old pipe-maker who fashioned this bowl was an excellent mechanic. Not only is the general conception of the head very good, but the high finish is remarkable. Locality, Loughheed farm, Nottawasaga.

The heads of other animals were also used as models for imitation in pipe-making, and our collection contains many forms, but the human face seems to have been a prime favorite everywhere.

When the head of such an animal as the wolf, for example, is imitated in connection with pipe-bowls, it is usually as an appendage to the inside edge, or edge next the mouth of the smoker when the pipe is in use. The neck rises from this edge, and the head faces stemwards.

As a rule, the human face was made to form the front side of the bowl, as in the case of our own similarly ornamental pipes.

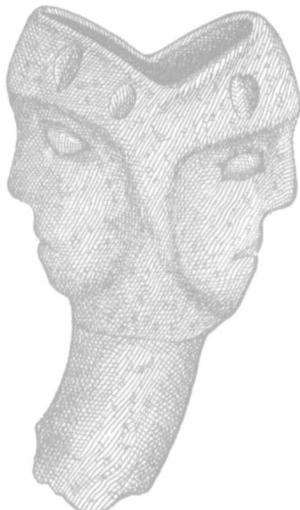


FIG. 14. (Full size.)

In Fig. 14 we have a very rare combination—a face looking each way. This pipe was part of Mr. Stewart's collection. It is of close texture, well baked and of superior finish.

Many of the clay pipes appear to have been fractured in the process of burning, and, consequently, have never been used. Fig. 14 is perfectly free from discoloration.

Besides forming pipes from clay in a plastic condition, there is evidence that another method was employed. The clay was burned occasionally in a solid lump, bearing the general form of the finished article, and the holes for bowl and stem were bored subsequently. Specimens of this kind are of more frequent occurrence near the extreme west of the province than elsewhere, and in a few private collections are the burned, but unbored and crudely shaped blocks.

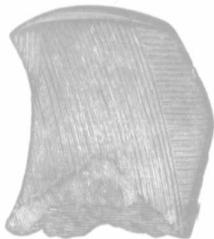


FIG. 15. (Full Size.)

Fig. 15 is a fragment of a pipe remarkable for the delicacy of its lining and the thinness of the piece. In texture and finish it is the best in our collection. Locality, Lougheed farm, Nottawasaga.

## STONE PIPES.

It might be difficult to state authoritatively whether in the development of Indian mechanical ingenuity, the clay or the stone pipe had precedence. For many reasons it would seem that stone had the superior claim to this distinction, notwithstanding the enormous amount of labor that was necessary to fashion them with such primitive appliances as the aborigines had at command. Contrary to what might be supposed in working such material, the outline was completed before the boring was begun.

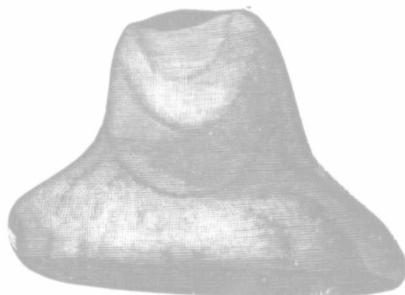


FIG. 16. (Full Size.)

Fig. 16 is an exceedingly ancient form. The material is very hard, and only part of the boring has been done. Both in bowl and stem the holes, each about half an inch deep, are conical at the base. From Mr. Stewart's collection. Locality, Brantford.

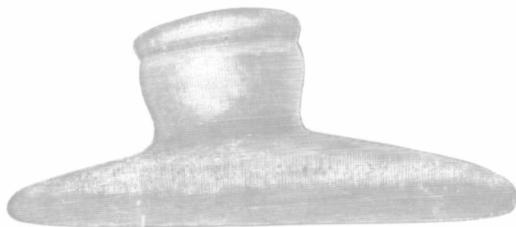


FIG. 17. (Full Size.)

Of the same type, but much more gracefully formed, is Fig. 17. The bowl is perfectly round and relieved by a neatly cut groove near the top, so as to form a bead round the lip. The stem and shorter opposite projection are rounded on the upper side. Both here and in Fig. 16 the under sides are flat. This pipe is formed of steatite or soapstone, an easily wrought material.

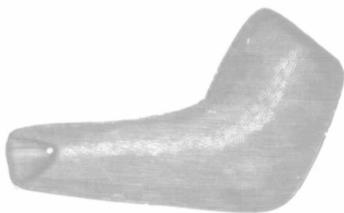


FIG. 18. (Full Size.)

In this pipe (Fig. 18.) we have something like the modern form. As is frequently the case, however, the hole in the bowl is exceedingly small: so small as to suggest that the article itself was more for ornament than use.

This seems to be unmistakably the case in Fig. 19, in which the aperture is smaller still, and at each corner of the extremely flattened stem is a hole for suspension from a string. The holes show marks of wear. Both pipes are quite black, and are of steatite. Locality unknown.

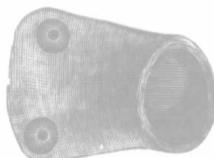


FIG. 19. (Full Size.)

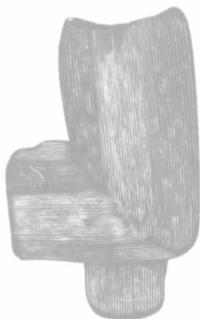


FIG. 20. (Full Size.)



FIG. 21. (Full Size.)

We have a somewhat singular variation from Indian methods in Fig. 20, the bowl and short stem being six-sided. Locality, Beverly township.

Even in stone we find an attempt made to imitate the "human form divine." Fig. 21, from Mr. McKnight's farm, Beverly, is of white marble, slightly discolored. It is roughly four-sided, and, although stemless, is complete, there being a hole bored at the back to communicate with the bowl.

Such heads are not uncommon, and many of them have a suspension hole, generally at the lower end. Such a hole is to be found in this specimen, although not shown in the cut, as it passes from right to left behind the chin.

The features are in very low relief, the nose being almost flat.

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FIG. 22. (Full Size.)

A more pretentious attempt at sculpture has been made in Fig. 22. The broken end would indicate that there had been originally material to form a stem, but the piece having become detached before the pipe was finished, a hole has been bored at the back of the neck for the insertion of a wooden tube. Through the lips of the bowl and at the base of the neck three other holes have been made—it is hard to say for what purpose.

The forms of pipe are almost infinite in variety, and the ancient people clung with greater tenacity to pipes of their own make than to anything else, after communication with the Whites enabled them to procure what they were quick enough to perceive were superior articles.



FIG. 23. (Full Size.)

The influence of European contact is plainly seen in Fig. 23, not only so far as the shape is concerned, but in the character of the finish, which shows the employment of better tools than those formerly available. But this is further evidenced from the appearance of the squared central portion, unless, indeed, we accept this as a proof that the "mystic art" was not unknown in the lodges of the aborigines! An enthusiast in this kind of lore might be curious in any case to ascertain in what "degree" the pipe had been made, but the nature of the markings are not such as to make the position of the "points" quite clear.



FIG. 26. (Full Size, stem half length.)

The natives of the Pacific Coast attained to high excellence in rude sculpture. Many of their pipes are marvels of ingenuity and much more complicated in design than Fig. 26, of which only half the stem is shown. This specimen is of jet black material. The stem is cylindrical, but the head is a compressed oval, the greater axis being from front to back. The exact locality is unknown, as this specimen is part of the York Pioneers' collection, and scarcely any article in it can be located.



FIG. 27. (About three-fourths Size.)

Fig. 27 is a remarkably odd pipe, if pipe it be, from the farm of Mr. Ed. Beecroft, lot 19, concession 8, Nottawasaga. It is made of bloodstone or catlinite. It is perfectly symmetrical in form. The broad side is little more than one-fourth of an inch in

thickness. The back consists of a strong square-sided rib (the wide end of which is shown in the engraving) of the same depth or thickness all along, but having its two sides converge almost to a point at the lower end. It was found in the ossuary already mentioned, in which a very large number of bodies were found upwards of forty years ago, on Mr. Beecroft's farm.



FIG. 28. (Full Size.)

One of the most remarkable relics ever found in this country is that shown in Fig. 28. It was presented to the Institute by Mr. Findlay McCallum, of Milton, in the county of Halton, and was found by him on his farm there.

Notwithstanding the length of the nose, the resemblance of the head to that of a monkey is very striking. The length of the tail also adds force to the belief that the animal named was intended to be represented, although the engraving does not bring this out very clearly. This appendage is made to form the front of the pipe, being turned up until it meets the neck, when it curves downwards for a short distance on each side. The feet, or hands and feet, are carved as if grasping the tail in this position. The hole forming the bowl is bored downwards from the shoulders and meets a smaller aperture at a right angle to it near the base, for the insertion of a stem. On each side of the pipe are six cavities—five on the body and one on the tail. On the base and front of the tail (as curved upwards) there are other six; on the top of the head are five more, and at the back, between the two holes, there is another, but much shallower hollow. The eye holes are deeply bored.

Two small holes have been made to imitate nostrils, and the lower side of the under jaw has been carefully worked to show the anatomical arrangement of the bones.

The surface of the pipe is black, whether from usage or by the application of a pigment it is hard to say, but the material itself is a light grey, very soft and porous,

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and quite unlike anything in the geological formations of this province. Under a magnifying glass small nutallic looking specks appear, but they are probably micaceous.

There is little doubt that the specimen found its way from more southern latitudes, along with the shells brought hither for the making of wampum.

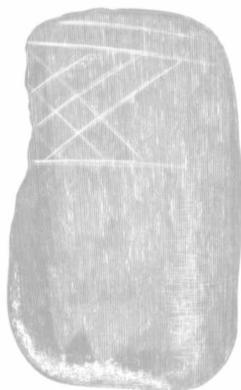


FIG. 29. (Full Size.)

The only interesting feature about Fig. 29 is that it was found in a veritable mound on the property of Mr. C. A. See, Tremont Park, Tidd's Island, Gananoque, along with a number of other extremely interesting and valuable relics.

It is part of a pipe bowl made from freestone. It is simple in design, the pattern consisting merely of a few diagonal lines.

#### BREASTPLATES OR GORGETS, AND PENDANTS.

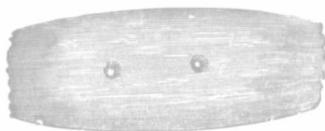


FIG. 30. (½ Size.)

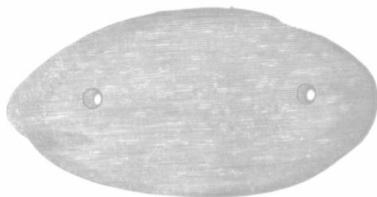
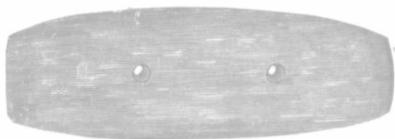


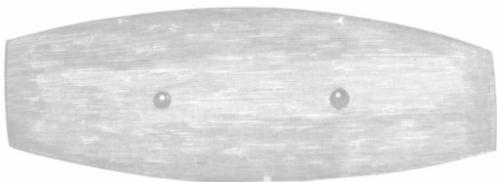
FIG. 31. (½ Size.)

There is perhaps no other class of Indian relics regarding which there is so much diversity of opinion as in relation to such as those figured from 30 to 38.

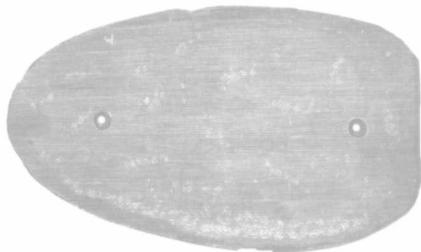
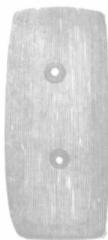
They are usually formed of a light, greyish blue slate, from one-fourth to half an inch at the thickest, and thinned off at the edges.

Fig. 32. ( $\frac{1}{4}$  Size.)

As may be seen from the cuts, they vary in shape, in size, and in the number, as well as the arrangement of holes, with at least one of which they are always found perforated, although the greatest number have two. They are found all over the province (wherever other relics appear), and every collector has one or more specimens.

Fig. 33. ( $\frac{1}{4}$  Size.)

Theories as to their use are nearly as numerous as the writers who have referred to them, and these are not few. They have been described as gorgets, or breast-plates, by those who consider them to have been purely ornamental. From this point of view the holes would be merely for suspension, and, although it is true that many have holes showing signs of wear, there are probably just as many that do not. Besides, the wear may be accounted for otherwise, as for example, by those who entertain the belief that the articles in question were used for the purpose of rounding thongs and sinews for bow-strings, fishing-lines, etc.

Fig. 34. ( $\frac{1}{4}$  Size.)Fig. 35. ( $\frac{1}{4}$  Size.)

It has also been held that they were worn on the crown of the head, as a means of attachment for feathers, porcupine quills and other gauds.

They may have been employed in some way for netting or weaving, or were, perhaps, simply regarded as charms.



FIG. 36. (½ Size.)

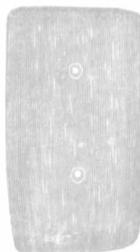


FIG. 37. (½ Size.)

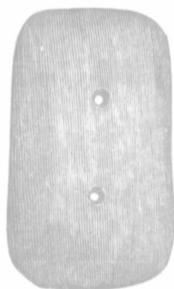


FIG. 38. (½ Size.)

In some instances the holes are bored straight through (Figs. 34 and 37), but generally they are oblique, as in Figs. 30, 31, 32, 33, and 36.

The smallest of these tablets, Fig. 35, is from the farm of Mr. George Strangways, near Elora. The others are from various places east, west, and north of Toronto.

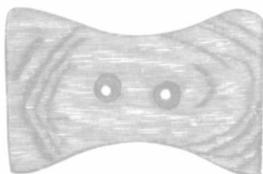


FIG. 39. (½ Size.)

Differing somewhat from these is Fig. 39. This beautiful specimen is almost symmetrical, and is richly banded with lines of deeper color than the ground. It is three-eighths of an inch thick in every part, including the edges, which merely have the corners slightly rounded. It was found near Jarvis, in the county of Norfolk, and formed part of Mr. Stewart's collection.

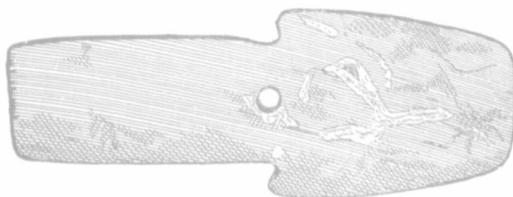


FIG. 40. (½ Size.)

This spade-like object, Fig. 40, was procured from Mr. Wilson, near Sherkston, a few miles from Port Colborne, in the township of Humberstone. At both interior

angles there are considerable signs of wear, but not much about the hole. The material is also light blue slate, with irregular spar-like veins.



FIG. 41. (¼ Size.)

Fig. 41 is of a remarkably elegant form, very thin, and of beautifully veined greenish-blue slate. It was found near Galt.



FIG. 42. (¼ Size.)

Fig. 42 is peculiar in its being hollowed throughout the greater portion of its length, as shown in the cut. Regarding the hollowed surface as the top of the specimen, the bottom is an inch and a quarter deep at the middle, from which it tapers to both ends until it is only three-sixteenths of an inch in thickness. The piece may be described as being of canoe shape. The inevitable holes with which it is pierced show slight signs of wear.

If used simply as an ornament, parallels are not wanting for such an application among ourselves, for jewelry is frequently made in imitation of snow-shoes, toboggans, anchors, horse-shoes, etc.

Of similar material, but totally different as to form and finish, are two pieces from the Tidd's Island mound. One of these is shown at Fig. 43. The under side is flat, the side shown in the cut is ridged, being three-eighths of an inch thick in the middle and sloping sharply to the edges. They were probably used as ornamental pendants, and worn either round the neck or the waist, although scarcely any signs of wear are observed about the holes.



FIG. 43. (¼ Size.)

### CEREMONIAL WEAPONS.

An easy way of accounting for the probable use of mysteriously formed archaeological objects is to state in general terms that in all probability they were used for ceremonial purposes. There is, however, a class of these, gracefully modelled, highly finished, and of comparatively fragile material, that seem, without any doubt, to have been employed by the Indians only upon "high" occasions, *e. g.*, their various dances, celebrations of victory, and tribal pow-wows.

In nearly every case the objects in question are symmetrical, or nearly so, and are perforated in the centre as if for the reception of a handle or staff, which, from the size of the hole, must have been too slender to prove effective for offensive or defensive purposes.

3 (C.I.)



FIG. 44. (½ Size.)



FIG. 45. (½ Size.)

Figs. 44 and 45 are of the simplest form, the transverse section being perfectly round. In Fig. 44 the side view is given, and the hole, only about three-eighths of an inch in diameter, is not shown.

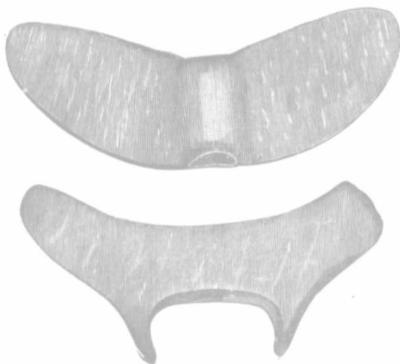
Fig. 45 is a much heavier weapon. The proportionately small hole is shown on the upper side.

Stone heads of similar form are in common use among the Indians of the North-West; but, instead of the hole, a groove is cut round the middle, about which is bound a strip of "Shaganappi" or raw-hide for the purpose of fastening the weapon to the handle.



FIGS. 46 and 47. (½ Size.)

Figs 46 (from Plympton) and 47 (from Zone Township) show what was a favourite form. They are suggestive of buffalo-horns, and we know that the supposed originals were frequently employed as an ornamental head dress. The material is a beautifully marked slate in both cases, and the knobbed ends probably served as means of attachment for scalps, feathers, or trophies of any kind that might thus be displayed when carried aloft by the happy possessor in the indulgence of his orgies. These formed part of Mr. Stewart's collection.



FIGS. 48 and 49. (½ Size.)

Other shapes are not uncommon. Fig. 48 (from Wingham) has some resemblance to the seed of the maple; but Fig. 49 (from lake shore, Norfolk) appears to be quite fanciful, as indeed are most of these "ceremonial" objects.



FIG. 50. (½ Size.)

Fig. 50 (from Port Perry) has been originally almost square; but, one corner having been broken, subsequent rubbing down has again produced a sharp edge. Such evidences of repair are not unfrequent. Articles that have been made for one purpose have, in some instances, been modified, on account of breakage, so as to be suitable for another use. ■

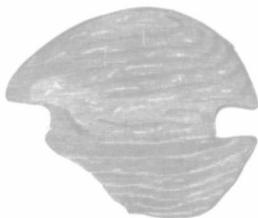


FIG. 51. (½ Size.)

For comparative purposes, Fig. 51 is here introduced. It represents a so-called "banner-stone" found in an Ohio mound; and one cannot fail to be struck by the similarity of design and workmanship when compared with those of Indian origin in our own and other collections.

It is not unlikely that sufficient proof will soon be forthcoming to show us very clearly that the Mound-Builder race theory is foundationless, and that all the highly imaginative speculations relating to an exterminated people have no good ground on which to rest.

As a rule holes made by the aborigines in the various articles they produced, are round, the result of drilling. An elliptical hole is rarely met, but in Fig. 52 the perforation which has been made from right to left, a little above the inner angle, is a well-formed oval. A hole of this shape indicates considerable advancement in mechanical ideas, because it could have been formed only by drilling two small holes side by side, and then cutting away the separating material.



FIG. 52. (½ Size.)



FIG. 53. (½ Size.)

Polished stones like Fig. 53 are very rare and their use is doubtful. Even as ceremonial objects it is not easy to divine what part they played. Shorter and proportionately thicker specimens are sometimes found having a hole bored diagonally at each end from the flat surface outwards, and it has been suggested that they were used as hand-pieces in the middle of bow-strings, but Fig. 53 is too long and too slender for such a purpose, unless we suppose it to have been intended for attachment to a purely ornamental weapon. There are no holes at the extremities.

#### TOTEMS OR TRIBE SYMBOLS.



FIG. 54. (½ Size.)



FIG. 55. (½ Size.)

There is much difference of opinion regarding the use of such specimens as are figured here (Figs. 54 and 55). They have been believed by some to be "totems," or tribe-emblems, but Mr. H. Gillman, in his report to the Smithsonian Institute, 1875, says: "I have learned, through an aged Indian, that in olden times these ornaments were worn on the heads of Indian women, but only after marriage. I have thought that these peculiar objects which are always made of some choice material, resemble the figure of a brooding bird; a familiar sight to the 'children of the forest' that thus they are emblematic of maturity, and as such were designed and worn."

Fig. 54 is plainly meant to represent a bird, although the form is somewhat conventionalized. The eyes are enormously out of proportion, being nearly of the same diameter as the head itself. They project by means of a footstalk nearly half an inch from the sides of the head, but this is not well brought out in the engraving. The two

feet seem to be formed solely for the purpose of enabling the figure to balance itself. A hole is bored obliquely through each end from the inside of the feet outwards in a forward and backward direction. It was found near Thorndale.

Fig. 55 is of a pattern not uncommon in mounds. The outline is suggestive of bird-form, but there has been no attempt to work out any details.

The locality in which this specimen was found is unknown. Both of them formed part of Mr. Stewart's collection.

Another specimen, almost identical in form with that last mentioned, has been so ingeniously shaped from a piece of richly grained slate as to make an oval mark containing a dark spot, take the place of an eye. This really beautiful specimen is from the farm of the Messrs. Baby, near Lambton.

Probably the best "totem" in our collection was found near Port Rowan. It is formed of a hard amygdaloid, and must have cost an enormous amount of labour to bring into its present shape, although what that shape is one can hardly say. In some respects it resembles a snail, perhaps, more than anything else. It was procured from Mr. Stewart.

All these animal forms are worked out in relief, and are from one to two inches in thickness, but from the Lougheed farm, Nottawasaga, we procured two small figures that may also be considered as "totems" wrought from slate less than an eighth of an inch in



FIG. 56. (Full Size.)



FIG. 57. (Full Size.)

thickness. One of these is probably a bear (Fig. 56), the other of about the same size is shown in Fig. 57, and is no doubt meant to represent a beaver. In the former case a small hole has been bored about the middle of the back, as if to suspend it evenly, but in the latter there is nothing of this sort.



FIG. 58. (Full Size.)

Something in the line of sculpture is shown at Fig. 58. The same kind of material is employed here also. The design is a wolf's head, the ears projecting sharply and proportionably high. Two deep holes have been bored for eyes, and a third hole,

larger and deeper, has been drilled in the forehead. The back portion of the head is unfinished.

A very delicately carved head an inch and a half long was found on the Dwyer Farm, Beverly. Want of time has prevented it from being figured. The workmanship reminds one more of Central America than of this latitude—even the features and head-dress are not in correspondence with what we would expect from a Canadian Indian.

We have just received from the Longheed Farm, Nottawasaga, a marvellously carved stone pipe; the human head and face on which are the work of one who must have been a very Michael Angelo among the aborigines. From the same place also comes the head of an owl in clay, also of fine workmanship.

Imitations in clay are sometimes very good. The hawk, or eagle, figured in Fig. 71, is a sample of several in our collection, and some of our best specimens have come in as this is going to press, so that further reference to them must be deferred. Figs. 56 and 57, recently added specimens, are from Longheed Farm.

It is highly probable that all or most of these objects were employed for totem purposes, that is, much as we use flags or coats of arms, viz., as symbols of nations or tribes.



FIG. 59. (Full Size.)

#### SLATE SPEAR HEADS.

Among the "ceremonial" weapons may be included certain spear, or arrow-points, made of the same fragile material as that from which the "banner stones" are formed, viz., light, grayish-blue slate. No deadly wound could well be inflicted by such a weapon more than once, because it would inevitably break the moment it hit the mark.

Fig. 60 shows the common way of fastening to a shaft.

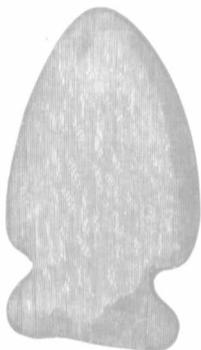


FIG. 60. (Full Size.)



FIG. 61. (Full Size.)

A different mode of attachment is shown at Fig. 61. This specimen was found by Prof. Vandersmissen and myself on Withrow Avenue, Toronto, where workmen were engaged in making the road-bed. Our collection contains several similarly formed heads of the same soft slate material.

## GROOVED AXES.

Of stone axes and chisels (or so-called skinning knives), we have a large number and variety, but little need be said about them. Some of them are long enough to be held immediately in the hand when employed as tools; others, not quite so long, were no doubt bound to handles, and the shortest—from three to four inches—were inserted in sockets at the end of stout wooden hafts in such a manner as to leave only an inch or so projecting. Mounted in this way, they formed an effective weapon at close quarters.

A very beautiful specimen of chisel (Fig. 62) pointed at each end, was presented to the museum by Chief Smith (De-kah-neu-ra-neh) of Brantford. It is fully one foot in length, and is the most elegantly formed implement of the kind in our cases.



FIG. 62. (½ Size.)

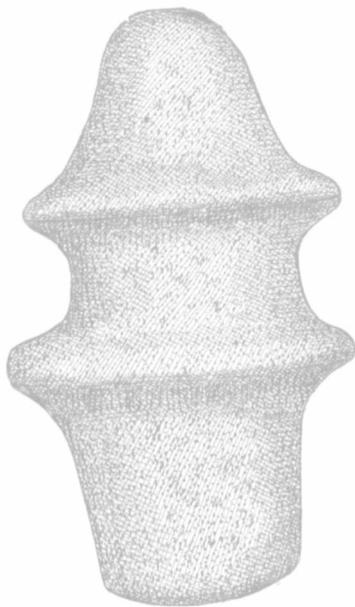


FIG. 63. (½ Size.)

We can also boast of a few first-rate specimens of grooved axes. Some of these form part of the York Pioneers' collection, and others were secured from Mr. Stewart, of Strathroy.

Fig. 63 shows one of the latter, found near Galt. It is a magnificent piece of aboriginal workmanship, and is well adapted for the purpose it was intended to serve. Of syenite, hard and close-grained, it is capable of bearing a much keener edge than one might suppose possible. The mode of fixing a handle to such an implement is easily seen.

## GOUGES.

Among all the products of the Indians' handicraft few exhibit more patient labor than do the stone gouges that are occasionally found in ossuaries and on old village sites.



FIG. 64. (1/4 Size.)



FIG. 65. (1/4 Size.)

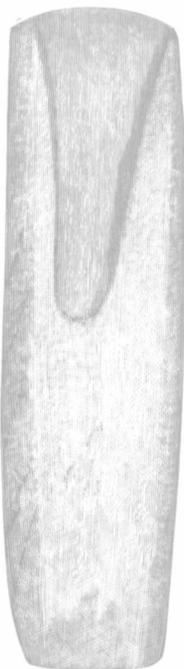


FIG. 66. (1/4 Size.)

The material of which they are usually formed is a close-grained stone of primary formation, and capable of bearing a fine edge. Many gouges are hollowed only far enough back to permit of the lips being properly formed, as in Figs. 64, 65, and 66; others, like Figs. 67 and 68, are hollowed the whole of their length.

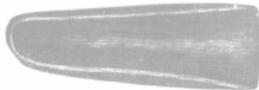


FIG. 67. (1/4 Size.)

Figs. 65 and 66 are from the Baby Farm, Lambton, where they were found by Mr. Kirkwood, an enthusiastic collector; and Fig. 67 is from the County of Victoria, and is

made of what seems to be lithographic limestone. The largest specimen (Fig. 68) we have was presented to the Institute by Mr. John Hind, in 1857, but the label bears no record of where it was found.

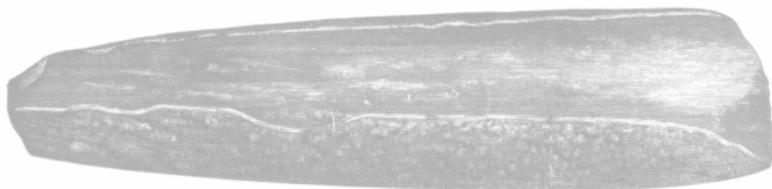


FIG. 68. (½ Size.)

#### TUBES.

The same kind of stone that was used for making "gorgets" and "ceremonial weapons" was employed for the production of tubes, the use of which is not ascertained. It is said that among some south-western tribes similar tubes are still used by the "Medicine Men" when performing their incantations on a diseased person. Applying one end of the tube to the seat of pain, they profess to suck out the evil spirit that causes the trouble. This is not an improbable use; but, however that may be, much time, labour, and ingenuity have been expended in their production. Many of them are almost perfectly cylindrical, and some are flattened on two sides. The accuracy of the boring is generally remarkable. Sometimes, in a length of even six inches, there will appear no more variation than if the work had been done in a lathe.



FIG. 69. (½ Size.)

Fig. 69 is nearly seven inches long, and is a fair specimen of aboriginal skill in this line. It formed part of Mr. Stewart's collection.



FIG. 70. (½ Size.)

Fig. 70 is more clumsily shaped, but is well bored, and shows what is a more common form. Objects of this kind are comparatively rare.

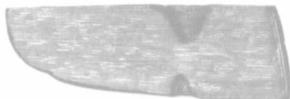


FIG. 71. (½ Size.)

The accompanying cut (Fig. 71) is a section of a stone through which it has been intended to bore a hole. It enables us to form some idea of how such work was performed.

## BEADS.

An almost indispensable portion of the aboriginal outfit, for both male and female, was a quantity of beads. Bloodstone or catlinite was a favourite material, but other stones of brilliant color were often substituted. We have been very fortunate in being able to procure some pieces of stone in process of being shaped into beads, and which shew us the laboriously slow methods that were necessarily employed by the Indians in fashioning these personal adornments.

We have in our cases several pieces of hard, close-grained stone partially cut into strips preparatory to being squared, or rounded, and bored. We learn from this and other specimens that the rough block of stone was first polished on two sides, so as to present even surfaces for marking off and for being ultimately sawn through by means of flint-flakes. Probably this sawing process was aided by water. When a moderately deep cut had been made on both sides, the strip was broken off, cut into lengths, and bored; but how the boring was done, when the holes required were so small, it is not quite so easy to understand. Beads, broken lengthwise, enable us to see that the process was carried on from each end; but here certainty ceases.

As this goes to press, a specimen has come into our possession from the celebrated Loughed Farm, proving that the Indians understood a method of cutting stones somewhat similar to the plan known as "plug and feather," which we employ in our quarries to-day; a series of holes has been bored in line close to each other, the necessary or unnecessary piece of material has been broken off, and then friction has been resorted to for the purpose of removing the projecting portions between the holes. Our specimen shows the work in an incomplete condition, and like all other similar specimens is especially valuable on that account.

The beads were sometimes from three to six or more times as long as they were thick; almost cubical, and frequently sometimes roughly spherical.



FIG. 71. Full Size.)

Fig. 71 gives a fair idea of some of the shapes most commonly found. The early French and other European traders were not slow to take advantage of the Indians' fondness for this kind of display, and they consequently made and imported enormous quantities of coarse glass beads of brilliant hues (generally red and blue) and bearing a

pattern that no doubt powerfully fascinated the native eye. (Fig. 72.) For these gewgaws valuable peltries were readily exchanged, and in process of time the European



FIG. 72. (Full Size.)

article wholly displaced the ancient stone adornment. Other beads less pretentious in size and color were also brought over by the ton, and are now found in almost every ossuary of post-European origin.

Fig. 73, from Beverly, is a common form. It is made of blue glass, and is square sided.



FIG. 73. (Full Size.)



FIG. 74. (Full Size.)

Fig. 74 is a stone bead or pendant of a somewhat unusual pattern. Instead of a hole piercing it lengthwise it is provided with two holes—one at each end, bored at an angle, so as to pass through the corner.

The cut would seem to indicate that they pass through almost at right angles, but this is owing to a mistake on the part of the engraver.

## FLINTS.

Little need be said of flint implements in a general way. All over the world they are much alike.



FIG. 75. (Full Size.)

The long, narrow, and comparatively thick flints were no doubt used as drills in the fashioning of stone pipes, and such articles as the necessity for carrying which required a perforation. Fig. 75 is a fair sample of drill.

A few illustrations are given to show the different methods of attaching arrow heads and spears to shafts.

The simplest method was that employed with the war arrow, as Fig. 76. The base of the weapon generally had a slight inward curve, and was worked to a thin edge for insertion in the cleft end of the shaft, without any more binding than was requisite to hold it firmly in position while upon its errand of death. Being short, thin and sharp, it easily penetrated the flesh and embedded itself beyond sight, so that on any attempt being made to remove it the shaft became easily disconnected, and left the weapon in the wound.



FIG. 76. (Full Size.)



FIG. 77. (Full Size.)

Fig. 77 is of the same type, but larger, and has the angles at the base prolonged to form barbs.

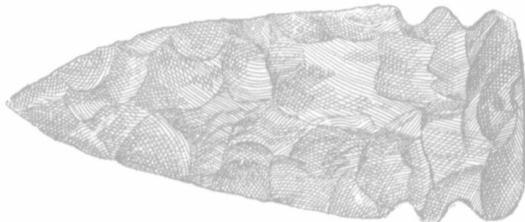
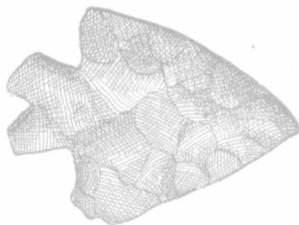


FIG. 78. (Full Size.)

Fig 78 is somewhat peculiar in being double notched, besides having a neck. Flints

notched in this manner are rare. This was in Mr. Stewart's collection, and the locality is unknown.



(FIG. 79. Full Size.)

A rarer form still is seen at Fig. 79. In this case the neck of the weapon is cleft. Evidently the chipping is not accidental, because it is done neatly and evenly from both sides.

Figs. 80 and 81 represent two of sixty-eight, all roughly leaf-shaped flints found together a few inches below the surface, on the farm of Mr. Arthur Seabrook, near Komoka, in the township of Delaware. The farm is on the right bank of the Thames, and the pieces were embedded in the level ground at an elevation of at least fifty feet above the river, the bank of which is here quite high. Not far away from the spot is a stream of spring water which forms a beautiful cascade as it tumbles over the steep brow to reach the river; and taken altogether the situation was just such as would delight the heart of an Indian.



FIG. 80. (Full Size.)

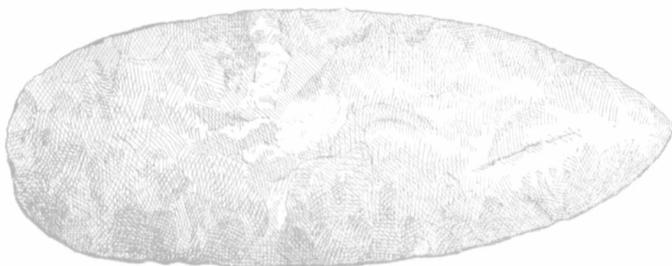
If we regard these rudely formed flints as finished articles, they could not have been intended for use as arrow-heads—their flight would be too uncertain: besides no provision has been made for fastening them to a shaft. The latter reason would also preclude their use for spear or lance purposes. It seems highly probable that they were intended for insertion in the heads of clubs—the tapering end being let into the wood, and the sharp semi-circular edge allowed to project from an inch to an inch and

a-half. On this supposition their very roughness would be an advantage to them in maintaining their hold.

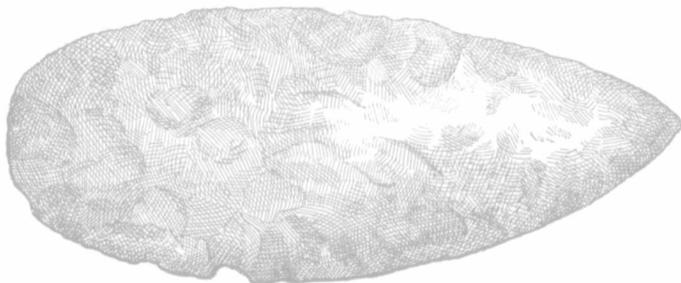
The whole of Mr. Seabrook's "find" is now in our collection.



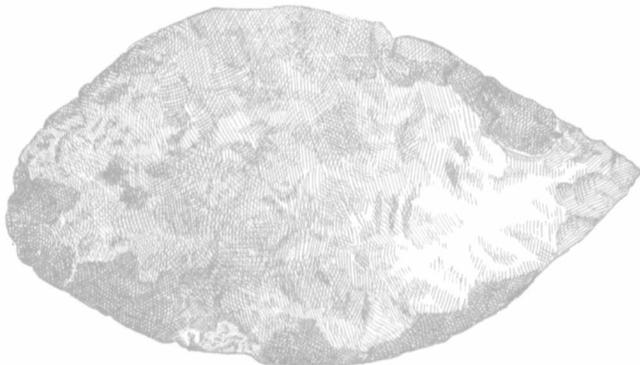
FIG. 81. (Full Size.)

FIG. 82. ( $\frac{1}{2}$  Size.)

Figs. 82, 83 and 84 are from the Tidd's Island Mound. They are chiefly remarkable for their great size—so great as to hinder the supposition that they were used even as spears.

FIG. 83. ( $\frac{1}{2}$  Size.)

The longest (Fig. 83) measures nine and a-quarter by three and three-quarter inches,

FIG. 84. ( $\frac{1}{2}$  Size.)

and another (Fig. 84), is eight and a-half by four and a half inches. The latter is of a dark grey compact, but shaly-looking material, and very thin in proportion to its other dimen-

sions; the former is of the same cherty stone as that from which the arrows or "flints" are generally formed.

There can hardly be a doubt that these large objects were used as spades or as hoes. The surface soil on the island is light and might be readily stirred by means of these tools, even if held directly in the hand, but is not improbable that they were attached to a handle.

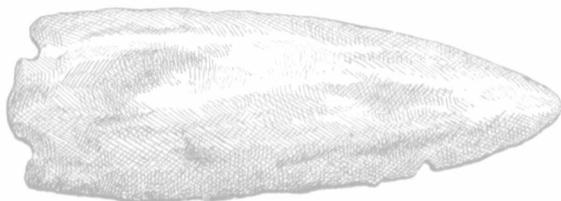


FIG. 85. ( $\frac{1}{2}$  Size.)

Some of the smaller specimens from the same place are of quartzite, in one (Fig. 85) the material is of a pale, milky hue, and presents a beautiful appearance. The lower portion of the neck has been broken off.



FIG. 86. ( $\frac{1}{2}$  Size.)

Fig. 86 is also a fine weapon. The quartzite has rich dark veins running through it. Neither in this case nor in that of Fig. 85 does the cut do anything like justice to real appearance of the stone.

Some of these were found by Mr. C. A. See, of "Tremont Park," in which the mound is situated, and some were found by myself when examining the place subsequently. Those that may be regarded as agricultural implements, are very thin in proportion to their length and breadth.

With regard to the vexed question, Who were the Mound Builders? I venture the opinion that these relics and those of copper, referred to elsewhere, which were found in the same place, afford a strong argument in favor of the belief that the people hitherto spoken of as an extinct race, were none other than the Indians themselves. That the historic or recent Indian knows nothing whatever regarding the origin of the remarkable earth-heaps, known as mounds, is no more singular than that they are now totally ignorant of the uses of many such comparatively modern implements and utensils as are to be found in almost every collection.

As a people, they have simply changed their habits—slowly, no doubt, and in the absence of any literature, tradition has failed to preserve a record of obsolete customs, excepting in so far as these may be mentioned incidentally in their mythology.

The Institute was fortunate in having secured all the characteristic specimens found in the Tremont Park Mound, and special thanks are due to Mr. C. A. See, the proprietor, for his generosity not only in presenting the specimens he himself had found, but for permitting us to prosecute a further search, and thus to add many more valuable articles.

## GRINDING AND RUBBING STONES.



FIG. 87.

From the farm of Mr. James Dwyer, in the township of Beverly, a prolific source of good material, we obtained the large stone of which the above is a fair representation. It is fully three and a half feet long, and about two and a half in breadth. When lying in Mr. Dwyer's bush it was upwards of a foot in thickness, but this has been considerably reduced to render it more portable.

It is a fine gritty freestone, and bears marks of usage by the Indians for rubbing, smoothing and sharpening purposes.

Mr. Dwyer kindly undertook, free of cost, to team this massive and instructive specimen to Copetown station (a distance of eight miles from where it was embedded in the soil), for transmission to Toronto.

Other stones that have been used for similar purposes are known to exist in various parts of the Province, and it is hoped that public-spirited citizens, upon whose property these lie, will emulate the example of Mr. Dwyer, for the benefit of the Provincial Archeological Museum.

## SHELL OBJECTS.

Somewhat similar to the beads, and often used for the same purpose in a measure, was the *wampum*, or white shell money of the Indians. It was made in two forms, discoidal and cylindrical. Woven into belts, it served as a girdle, and special patterns were sometimes made to confirm bargains and ratify treaties between various tribes. The arrangement of the bars and other portions of the design had special significations, the recollection and interpretation of which were entrusted to a chief known as the "Fire Keeper," who was solemnly bound not to permit the belts to go out of his care without the permission of his tribe in council assembled. Treaty belts of wampum were from three to six feet in length, and from six inches to a foot wide. The Mohawks, on the Tuscarora reserve, near Brantford, still own some of the belts that were the joint property of the Six Nation Indians, previous to the American war, but none of the specimens are very ancient, as the cylindrical wampum of which they are composed is evidently of European manufacture, although made from shell. A considerable quantity of the same kind was found a few years ago in a cave on the Grand river, near Elora, and it was quite evident that the workmanship was that of the "Pale Face."

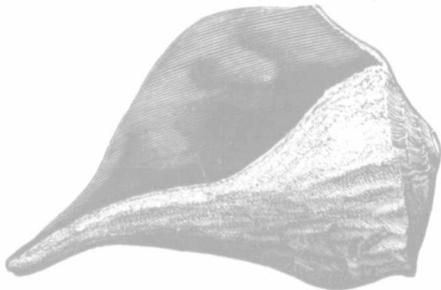


FIG. 88. (1-16 size.)

The discoidal, or flat form, is less common. It is made from a large univalve found on the shores of the Gulf of Mexico. Fig. 88 is a specimen that was found at Penetanguishene, and presented to the Institute thirty-two years ago, by Dr. Richardson, in 1856. We have specimens from Nottawasaga, and from the Dwyer farm, in Beverly, illustrating nearly all the steps in the manufacture of this wampum from the whole shell to the finished article.

These show us (Fig. 89) that after portions of the shell had been broken off, they were cut partly through on both sides, so that strips from three-eighths to about five-eighths of an inch wide might be formed. These were again cut across to make square blocks—a hole was bored in the middle from both sides, and the corners were ground down until the finished article was perfectly circular.



FIG. 89. (1-16 size.)

Many specimens of this "shell money" are so accurately made as to suggest that European traders imitated it as they did stone beads.

Another variety of wampum was made either of a black shell, or of a purple colored shell, and we learn from the writings of early settlers in New England that this dark or black wampum was estimated at several times the value of the more common white article.

The columellæ of univalves were also made into a roughly cylindrical form when small, but when larger pains were taken to form them more truly, and specimens are in our collection four inches in length and upwards of half an inch in diameter.

Shells from one-fourth of an inch to two inches long were sometimes perforated and worn whole, as pendants or bangles. Fig. 90 is one of this kind, measuring fully two inches in length, and of a species found only in sub-tropical salt water.



(FIG. 90. (1-16 Size.)



FIG. 91. (1-16 Size.)

But the unios or native fresh water mussels Fig. 91 were also employed for purposes of personal adornment. Sometimes they were merely bored, but occasionally an attempt was made to improve their appearance by a series of markings.



FIG. 92. (1-16 Size.)

Fig. 92 is one of these on which the native artist has taken some pains to produce the semblance of a fish.



FIG. 93. (1-16 Size.)

A small, symmetrically-shaped pendant, made from a shell like Fig. 88, is shown at Fig. 93.

#### BONE AND HORN.

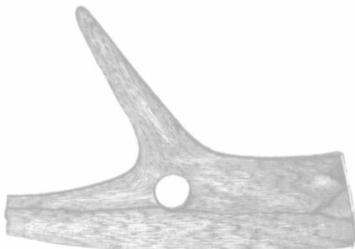


FIG. 94. (¼ Size.)

Bone and horn were utilized in a number of ways. In Fig. 94 (from the Dwyer Farm, Beverly) the hole and cut end are the only indications of art. Other specimens of horn in our collection have been bored in the same way. A large but rudely formed gouge, made of horn, is the only implement we have of that material besides the perforated pieces already referred to.

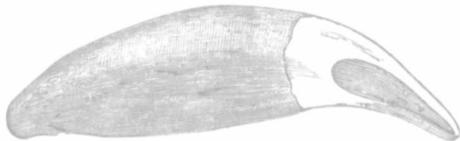


FIG. 95. (Full Size.)

In almost every burial place are found numerous bears' teeth. Occasionally these have a small hole bored at the extremity of the root, but usually they are intact, as in Fig. 95, which is of the natural size. Bone was much more frequently employed than

horn. Of this were formed the needles, or awls, so indispensable in the making of clothing and moccasins.



(FIG. 96. Full Size.)

As a rule these were made from long splinters, ground to a fine point, or from whole bones of suitable size treated in the same way. (Fig. 96.)

They could have been employed only to pierce holes, through which the sewing material had to be thrust. A famous old needle-maker must have plied his vocation for some time not far from Toronto, as considerable quantities of these bone articles have been found in the township of York.



FIG. 97. (Full Size.)

In Fig. 97 we have what may truly be called a needle. The eye is well formed, and the specimen possesses evidence of long use. It is extremely thin, being scarcely one-twentieth of an inch thick in any part.

The two specimens figured, besides a number of others, form part of the Long collection, presented to the Museum by Mr. W. Long, Jr., of Lansing, York Township.

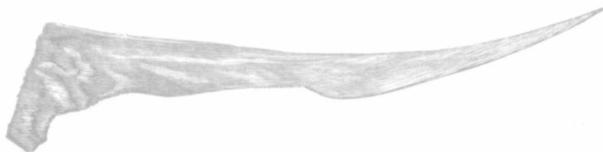


FIG. 98. (1/4 Size.)

Fig. 98 may be called a bone knife, if we may judge from the shape of the specimen, but its cutting qualities would hardly recommend it. In the modelling of pottery it would have proved useful both for smoothing the inner surface and for marking the pattern on the outer one. Loughed Farm, Nottawasaga.



FIG. 99. (1/4 Size.)

We have a few specimens of bone spear or harpoon. The hole in the flat portion has been either to aid in fastening it into a handle or to carry it by a string when not in

use. The form is very much like that still employed by the Eskimo. Spears of this kind were probably used for securing the larger kinds of fish. Fig. 99 was found by Mr. Long, in York Township. We have another fine specimen from the farm of Mr. James Rae, Beverly.



FIG. 100. (Full Size.)

Fig. 100 may have been applied to a like purpose, but the barbs seem to be hardly "pronounced" enough. Perhaps this is an unfinished specimen.



FIG. 101. (3/4 Size.)

In Fig. 101 we have also three barbs instead of one as in Fig. 99, and a hole in the same relative position. This specimen is not so well finished as the former.



FIG. 102. (Full Size.)

Bones ground down, as in Fig. 102, are frequently found in ossuaries and on old camping grounds. They are popularly known as whistles, and I have heard of persons who are able to produce a loud and shrill sound from them. Generally these bones are ground quite flat on both sides, but more on one side than on the other, the cavity of the bone presenting the wider opening on the former side. Sometimes, however, only one side is ground flat, and the other is worked down angularly at each end until the hollow of the bone is met. Those shaped in this way certainly *look* more like whistles, but I have never been able to produce any sound from them.

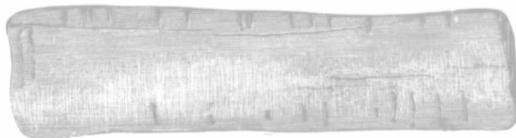


FIG. 103. (Full Size.)

Lacking anything in the form of literature, and not having an extensive system of numeration, the Indians had to resort to such expedients as wampum belts for the preservation of important national or tribal records, whilst for those of a more personal

character, *e. g.*, number of days' or of moons' travel; of braves in a party; of prisoners captured, or of scalps taken, they resorted to the simple expedient of notching the



FIG. 104. (Full Size.)

angular edges of short pieces of bone, which were easily carried on a string. Figs. 103 and 104 are good examples of these "tally bones." Both are from lot 34, con. 7 (Dwyer's farm), Beverly.

Except as an article of adornment, one can hardly imagine any use for the diminutive bone mask, Fig. 105. The face has a convexity not well brought out in the illustration, and the back is correspondingly concave. The eye holes are bored clear through. Loughed farm, Nottawasaga.

It is seldom that we find any attempt to represent the whole human form, but this has been done in Fig. 106 in so far as the material would permit. In slight relief the right hand covers the left breast, and the left is crossed to the waist at the right side. The shape of the bone prevented any attempt to make feet. A small hole penetrates the neck from right to left, suggesting that it was worn as a pendant, either singly or with beads. This very interesting specimen of native art was presented to the Museum by Mr. Jas. Rae, of Beverly. [The engraver has reversed the position of the hands.]

Our collection contains a considerable variety of articles made from bone besides those named. Bones of the larger birds were often formed into necklaces composed of pieces from half an inch to four inches long.



FIG. 105.  
(Full Size.)



FIG. 106.  
(Full Size.)

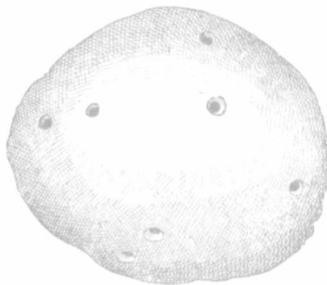


FIG. 107. (1/4 Size.)

Portions of the human skull were in request mainly for ornamental purposes. Fig. 107 is perforated with seven holes, and may have been interlaced with brightly dyed grasses, feathers or porcupine quills, and thus worn on the breast, or it may have formed a base of adornment for head gear. The holes have been bored from the inside. Dwyer collection.

We have another piece of skull somewhat larger, worked to a smooth edge all round, without any holes, for a wonder. This was probably used as a cup. It formed part of Mr. Stewart's collection and was found at Aurora.

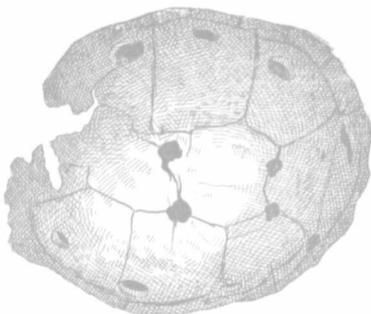


FIG. 108. ( $\frac{1}{2}$  Size.)

A turtle shell, Fig. 108, was found on the Dwyer farm, Beverly. It is perforated with fourteen holes—ten near the margin of the plates and four on the crown.

#### COPPER.

I am very sorry that want of time has prevented Principal Wilson, of Toronto University College, from furnishing a few notes on our copper implements, according to his original intention. As an authority on this subject Dr. Wilson is well known, and we can only hope that should another opportunity of this kind present itself he may be able to give us the benefit of his wide reading on such an extremely interesting department of this subject.

It is pretty well known that the aborigines mined, in a rude way, the native copper which is found so abundantly on the north shore of Lake Superior, and that they succeeded in hammering portions of it into form, mainly as weapons, cutting tools, or personal ornaments. It is extremely doubtful that they employed heat in any way for the purpose, although many writers are inclined to adopt this view. That they may have employed grooves, or what blacksmiths call "swages," in wood or stone into which the metal was pounded to give it the required form is not unlikely. Still, it is reasonable to suppose that, in such an event, some of these swage-stones would have been discovered, and I am not aware that this is the case.

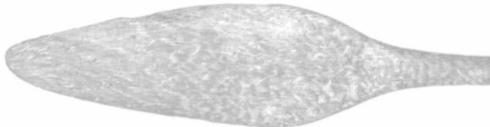


FIG. 109. ( $\frac{1}{2}$  Size.)

Figs. 109, 110, and 111 were evidently used as spear or lance heads. As with flint heads, it will be noticed that there are various ways of fastening to the shaft. In Fig.

109 there is a clearly marked neck for deep insertion. In Fig. 110 the body of the weapon merges imperceptibly into a neck, which must also have required a deep seat for



FIG. 110. ( $\frac{1}{4}$  Size.)



FIG. 111. ( $\frac{1}{4}$  Size.)

attachment; but in Fig. 111 we have a mode of fastening very much like what we find in most similar weapons of stone.

Fig. 109 was found near Brantford, Fig. 110 in the township of Caradoc, and Fig. 111 unknown, but in Ontario.

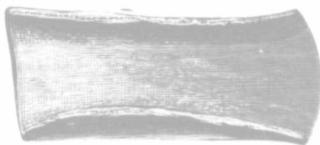


FIG. 112. ( $\frac{1}{4}$  Size.)

Fig. 112 is an axe or an adze or a chisel. It is stoutly made, has a good edge, and is formed (like Fig. 115) with a socket to receive a handle. The outer or convex side shows no signs of hammering, but rather gives color to the swage theory. This well-formed implement was found in Manitoulin, and was presented to the Institute by Mr. Yellowlees, who is a resident of the island.

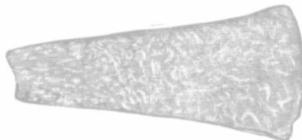


FIG. 113. ( $\frac{1}{4}$  Size.)

Fig. 113 was found by Mr. C. A. See in the Tremont Park Mound on Tidd's Island. It has flat sides and square edges, and is made for fastening to a handle by means of thongs, or for insertion in a hole at the end of a handle. It is evidently a tomahawk.

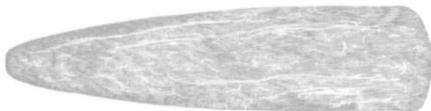


FIG. 114. ( $\frac{1}{4}$  Size.)

One of the most elegantly formed copper relics in our collection is that numbered 114. It is more of an adze or chisel than an axe, being sharpened to bring the cutting

edge wholly to one side. It is very symmetrically shaped, and the sides are flat; but the edges are rounded, suggesting the use of this tool directly in the hand. Compared with its other dimensions, this specimen is comparatively thin.

It was found by Mr. J. Humphrey within a short distance of his dwelling-house, on the farm lot 6, concession 2, in the township of Beverly.



FIG. 115. ( $\frac{1}{4}$  Size.)

Fig. 115 is supplied with a well-formed socket, which is fully one-third of the whole length. The inside as seen in the cut, is very much corroded, but the opposite is perfectly smooth, and the blade portion has been hammered so as to leave a ridge in the middle throughout its entire length. It was found "north east of Toronto."

The formation of a socket marks a very decided step in the adaptation of means to an end.



FIG. 116. ( $\frac{1}{4}$  Size.)

Fig. 116 is much corroded, but shows unmistakable signs of workmanship. The locality where found is not known; all the foregoing (except as noted) were procured from Mr. J. W. Stewart.



FIG. 117. ( $\frac{1}{4}$  Size.)

A knife is suggested by the shape of Fig. 117, and the shank is evidently made for insertion in a handle of some sort, and one is led to suspect European influence.

A much heavier and more clumsily shaped implement, in general form resembling the Tidd's Island tomahawk, was found near Brantford, and is now in our collection.

We have also a few specimens of copper bracelets. These were often made either by procuring native metal in "leaf" condition, or by pounding it very thin, then cutting it into strips and bending the edges over as if to make a tube, after which it was curved to form a single or double coil.

One of our bracelet specimens is made from solid metal.

Copper heads were fashioned in the same manner and were from one-fourth to three-fourths of an inch long. I collected a number of these from the Tidd's Island Mound, and, what was of more value, a piece of hide, perhaps a portion of belt or head-dress, which had been ornamented with them. Some of the beads were still lying on the material they had adorned, and the method of fastening may be clearly seen.

Finders of copper implements and weapons should refrain from making any attempt to clean or sharpen them, as no good end is thereby attained, whereas any operation having this object in view only gives the article a suspiciously modern appearance.

## MODERN SPECIMENS.

Mr. M. M. Fenwick, B. A., Head Master of the Farmersville High School, and F. F. Payne, Esq., have each presented the museum with a number of specimens that will prove valuable for comparative purposes.

The contribution of the former gentleman consists of wearing apparel, ornaments and weapons in use among the Arouay Indians of British Guiana; and the latter of several suits of Eskimo clothing, two Kayak models and a number of other valuable articles.

A donation of \$10 from President Vandermissen was expended in the purchase of specimens.

The following report by Mr. A. F. Hunter is interesting. The writer has gone over some portions of Simcoe County with considerable care, and his estimate of the number of villages and ossuaries, indicates that a large Indian population formerly occupied that part of our Province.

Mr. Hunter's general remarks have rendered it unnecessary for me to refer further to the points involved, more especially as the space at our command is limited.

## VILLAGES.

According to the Jesuits, there were in the year 1639 thirty-two inhabited villages of the Hurons in the small territory between Lake Simcoe and Georgian Bay. There is no reason to doubt the accuracy of the Jesuits' statement, but we have located the sites of upwards of one hundred Huron villages within that area. All these, however, were not occupied at the same time, as the remains show. Some had evidently been abandoned before the arrival of the French, because all research has failed to reveal any traces of French intercourse; while other sites yield abundant evidence of the presence of French traders. The Hurons were incessantly harassed by hostile tribes, and were compelled to shift their habitations from time to time. Their filthy domestic habits also rendered it impossible for them to remain long in one place. They were thus obliged to lead a half nomadic life, although they were quite stationary when compared with Chippewas, Ottawas, and the other existing tribes. And hence it came that only a few of the villages, whose remains are still traceable, were occupied at the time of the Jesuit census.

The sites of nearly all these villages are marked by artificial depressions and elevations of the surface of the ground, ashes and *debris* at some distance below the surface, stone implements, fragments of pottery in great abundance, besides many other relics. Articles of early French manufacture are often found. These villages were of various sizes, ranging from two or three lodges to extensive hamlets. The largest site known to us is in the northern part of the township of Oro; it covers an area of more than fifteen acres. Many of them were palisaded; but nearly all traces of fortification have been obliterated, owing to the great length of time that had elapsed since they were deserted. In one instance—a village site in the township of Flos—we observed the remains of stone fortification and mound-building without any collateral traces of French intercourse. A large ossuary near it contained no articles of French manufacture when it was excavated in the year 1882. All the Huron villages were situated on elevated ground where the soil is light, but close to a supply of fresh water; and in many cases we have been able to locate a chain of villages lying along a particular trail, whose direction depended on the physical features of the region.

The fortified missions of the Jesuits are still traceable—Ste. Marie on the Wye, Ste. Marie on Christian Island, Ste. Jean Baptiste, and a few others. The sites of Wenrio, Ste. Marie, Ste. Louis, Ste. Ignace, and other mission posts were minutely examined by Dr. Tache, as well as by Rev. Father Laboureau, of Penetanguishene, who has also examined many other sites with interesting results.

## OSSUARIES.

With many of the more important villages in the Huron country there are associated ossuaries, or bone-pits. The number of these, discovered and undiscovered, has been variously estimated; more than one hundred and fifty have already been excavated by different persons, but chiefly by the farmers. As to the number of skeletons in each pit, a great diversity exists. The ossuary of average size contains about three hundred, but a few have been found in the townships of Tay and Tiny containing more than a thousand, while others contain less than a dozen. These, however, are exceptional cases. Light, sandy soil was almost invariably selected for the pits, clearly because the Indians had no good implements for digging heavy soils.

The Huron mode of burial resembled in some respects that of the Sioux, Blackfeet, and other Northwest tribes of our own day. The body was placed after death upon a scaffold supported by four upright poles. At regular intervals of time, varying from seven to twelve years, (frequently ten) the skeletons were collected from the scaffolds and buried in a large pit dug for the purpose.

Brebeuf's famous account of the burial ceremony (*Relations des Jesuites*, 1636), has been fully confirmed by excavation of the ossuaries. In most cases, the small bones of the feet and hands, and such as could easily be blown from the scaffolds or removed by carrion-eating fowls, are not to be found, showing that the bodies were exposed on scaffolds before interment. In a few instances we found some large bones of the limbs (femora, tibia, humeri) arranged in bundles of a size convenient for carrying. Although the thongs which bound them together had entirely perished, the surrounding mould had kept them in their original position. Further proof of the strange mode of burial among the Hurons exists in the fact that the dimensions of the pit are almost always less than would have been required for dead bodies. No definite arrangement of the bones in a pit can be traced: although we sometimes observed that all the skulls had been placed with the face downwards—an arrangement by no means universally adopted. The few ossuaries, in which entire bodies were buried together, can easily be distinguished from the prevailing variety. When buried in this way, as sometimes occurred after a massacre, it was usual to arrange the bodies regularly with their feet towards the centre of the pit.

After the arrival of the French, brass kettles were often buried with the bones. These were purposely damaged at the time of interment by having a large hole knocked in the bottom with a tomahawk. As many as twenty of these kettles have been found in some ossuaries, especially those of the townships of Medonte. Besides kettles, they buried copper and glass beads, wampum, pipes, pottery, copper and stone axes, chisels, and in fact almost everything to be found in a Huron household.