

ANNUAL REPORT
OF THE
CANADIAN INSTITUTE,
SESSION, 1888-9.
BEING PART OF APPENDIX
TO THE
REPORT OF THE MINISTER OF EDUCATION, ONTARIO,
1889.

PRINTED BY ORDER OF THE LEGISLATIVE ASSEMBLY.



TORONTO:
PRINTED BY WARWICK & SONS, 68 AND 70 FRONT ST. WEST,
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ANNUAL REPORT OF THE COUNCIL OF THE CANADIAN INSTITUTE.
SESSION 1888-89.

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

The Council has much pleasure and gratification in recording an increased interest in the work, and an extension in the influence and prestige of the Institute.

The movement for a universal system of time-reckoning, initiated by Mr. Sandford Fleming, has spread far and wide. A deputation waited on His Excellency Lord Lansdowne in May of last year with regard to this subject, who was kind enough to bring the pamphlet on "Time-Reckoning" before the notice of the Secretary of State, through whom it was sent to all the colonial and foreign governments.

Cosmic or twenty-four hour time is being largely adopted on this continent. Inquiries have lately been received from the government of Hong Kong on this subject. The very enterprising kingdom of Japan has adopted the system as the basis of its time reckoning.

A clock marking cosmic time, the present of an American firm, has been in the reading room of the Institute for over twelve months.

The government of our Province paid the institute the compliment of placing one of its members, Mr. W. Hamilton Merritt, on the Royal Commission to enquire into the Mineral and Mining Resources of the Province. The report is of great value and will largely extend the development of our mineral resources.

The interest in the work of the Institute has not flagged during the past year; there have been 24 ordinary meetings at which 31 papers were read, and 36 meetings of sections at which 39 papers were read, or a total of 70 papers for the session.

The range and character of these communications have been fully equal to the standard of former years; they have been well and fully discussed. The average attendance of the meetings is in advance of last year. The attendance of members in the reading room has also increased.

The Council desires to record its high appreciation of the generosity of the Government in again placing the sum of \$1,000 at the disposal of the Institute for the extension of archaeological research. Through the indefatigable exertions of the curator many valuable additions have been made to the museum from the Province and from the United States. The admirable arrangement of the speci-

mens in the various cases, has greatly assisted the study of this important branch of our national history. It is gratifying to report that the museum has been visited by a large number of ladies and gentlemen, from many of whom valuable donations have been received.

The appointment of Mr. David Boyle, as representative of the Provincial Government at the Cincinnati Exhibition last year, has been productive of much good to the interests he represented there, and has been the means of many valuable gifts being presented to our museum. His archaeological report for 1888 has already appeared as an appendix to the report of the Minister of Education for last year.

The thanks of the Institute are due to Mr. Sandford Fleming for his exertions in procuring an interesting and valuable present from the Grand Trunk Railway Company of a portion of the first sod of the Northern Railway, cut on the 15th October, 1851, by Her Excellency the Countess of Elgin and Kincardine, and the bottle used on 14th January, 1853, to christen Collingwood harbor, and an extract from the *Globe* of the 26th January, 1863, giving an account of these relics and other interesting matters.

The members of the Photographic Section, desiring to extend their work in a more practical manner, resolved to form a Photographic Society having wider scope than they believed would be offered by a union with the Institute; they have in consequence withdrawn from the Institute. The Council regrets this action.

The Biological and Natural History Section continues to make its influence felt, and deserves the thanks, not only of the Institute but of the citizens at large, for its recent successful remonstrances against the destruction of the purely natural beauties of High Park.

The list of donations and exchanges has increased. The library has received many valuable additions; this department is carefully attended to by our energetic librarian; over 300 volumes were bound this year; extra accommodation in the library is an urgent necessity.

The treasurer's statement shows a satisfactory balance at the credit of the Institute, and the increased interest taken in the Institute by the comparatively small number of members in arrears.

The membership has been increased by 22 elections during the past session. The Council after much careful thought determined to make a thorough examination of the list of members and enforce the rules against members in arrears who refused to make any settlement. The list now submitted is more complete than any hitherto presented to the Institute, and represents truly the actual membership. The Council would urge on the Institute the importance of adhering to the step now taken, and enforcing the rules against members in arrears, as it is only by this means that membership in the Institute will become of value.

The Council endorses the remarks of the auditors that a proper valuation of the assets of the institute should be made.

During the past year the Institute has lost by death two distinguished life members, the Rev. Walter Stennett, of Cobourg, and Prof. G. Paxton Young. Apart from his special attainments in the department of Mental and Moral Philosophy, Prof. Young was a mathematician of a very high order; some of his later papers read before and published in the Proceedings of the Institute, place him in the foremost rank of mathematicians.

In recognition of his valuable services at the inception and in the early days of the Institute, as well as his honorable professional career, Mr. Kivas Tully, C.E., (who was our first Secretary) has been elected an honorary member.

Your Council is much gratified to announce that the invitation of the Institute to the American Association for the Advancement of Science to hold its next meeting in this city has been accepted, and there are bright prospects of a very successful meeting.

Following up the memorial of January, 1888, meetings have been held with the Honorable Commissioner of Crown Lands with reference to setting aside a tract of land for the preservation of the forests and wild animals in this Province. At his suggestion a memorial with a sketch map showing an area which could be made available for such purposes is being prepared.

The reports of the various Sections are appended. They all show satisfactory progress in their several branches.

All of which is respectfully submitted.

CHARLES CARPMAEL,
President.

To Summary :—

" Government Grant	\$1,000 00
" Journals sold	15 65
" Periodicals sold	9 49
" Biological Section	50 00
" Woodcuts	4 75
" For Conversazione of 1886	2 00
" Interest	60
	<u>\$2,408 61</u>

By Summary:

" Salaries	\$ 370 50
" Printing Journal	688 67
" " Miscellaneous	39 25
" Stationery	45 53
" Postage	129 26
" Freight and express charges	23 27
" Repairs	56 96
" Gas	32 88
" Water	24 00
" Periodicals	123 21
" Furniture	6 00
" House cleaning	99 30
" Fuel	78 25
" Taxes	9 36
" Phonographic Exhibition	15 00
" Architect	50 00
" Customs charges and brokerage	3 00
" Advertising	7 75
" Sundries	19 35
" Interest	212 00
" Promissory note	200 00
" Balance in Imperial Bank	137 00
" Cash in hand	38 07
	<u>\$2,408 61</u>

Examined and found correct.

(Signed) ARTHUR HARVEY, }
J. B WILLIAMS, } Auditors.

 JAMES BALN, JR., IN ACCOUNT WITH ARCHÆOLOGICAL GRANT.

To Government Grant for 1888-89	\$1,000 00
" Balance forward	35 45
	<u>\$1,035 45</u>
By Purchase of specimens	\$ 550 00
" " cases	91 65
" Engraving and printing of specimens for Report.....	102 50
" Travelling expenses and remuneration of Curator.....	285 67
" Bank charges.....	38
" Balance on hand	5 25
	<u>\$1,035 45</u>

Examined and found correct.

(Signed) ARTHUR HARVEY, } Auditors.
 J. B. WILLIAMS, }

 ASSETS AND LIABILITIES.

ASSETS.

Building.....	\$11,500 00
Warehouse.....	720 00
Ground.....	3,000 00
Library.....	5,000 00
Specimens	2,000 00
Personal Property	1,000 00
	<u>\$23,220 00</u>

LIABILITIES.

Mortgage No. 1, due 1892.....	\$3,000 00
" " "	1,000 00
Balance in favor of the Institute	19,220 00
	<u>\$23,220 00</u>

The Auditors having carefully gone over the accounts and vouchers beg to report.

That the cash accounts kept by Mr. Young are in perfect order.

That the distribution into the various heads of income and expenditure, made by Mr. Bain, the treasurer, corresponds therewith.

Your Auditors think it would be wise to have a proper valuation made of the various assets of the Institute—Library, museum and building, and to procure by this means a reliable statement of its Assets and Liabilities—and recommend the subject to the consideration of the Council.

(Signed) ARTHUR HARVEY }
J. B. WILLIAMS, } Auditors.

Canadian Institute, Toronto,

April 25, 1889.

APPENDIX III.

CLASSIFICATION OF PAPERS.

Classification of papers read, by subjects:—Anthropology, 1; Archæology, 3; Astronomy, 2; Chemistry, 2; Economics, 1; Geology, 3; History, 2; Mathematics, 1; Miscellaneous, 3; Philology, 3; Political Science, 1; Physics, 3; Physiology, 1; Sanitary Science, 2; Social Science, 1; Sociology, 2; total, 31 papers read at 24 meetings.

Read at the meetings of the Biological Section, 22 papers; Architectural Section, 3; Geological and Mining Section, 5; Philological Section, 9 papers; total, 39. Making in all 70 papers.

APPENDIX IV.

LIBRARIAN'S REPORT.

The statement for the Library for the year 1888-89 is as follows:

I. Donations to the Library	85
II. Exchanges:	
1. Canada.....	138
2. Great Britain and Ireland.....	481
3. United States.....	569
4. Mexico and South America.....	43
5. Austria-Hungary	150
6. Belgium.....	54
7. Denmark.....	4
8. France and Algeria	396

9. Germany.....	106
10. Italy.....	146
11. Netherlands.....	25
12. Norway.....	30
13. Portugal.....	7
14. Russia.....	37
15. Spain.....	18
16. Sweden.....	18
17. Australia.....	31
18. British India and China.....	34
19. Japan and Java.....	20
Total.....	2,307
III. New exchanges.....	39
IV. Total number of exchanges.....	435
V. Periodicals subscribed for, same as last year with the exception of "Hardwicke's Science Gossip," which has been discontinued.....	31
Total single copies of these received.....	769
VI. Number of volumes bound during the year.....	306
VII. Number of publications taken from Reading Room and Library during the year.....	1,900
All of which is respectfully submitted.	

GEO. E. SHAW,
Librarian.

REPORT OF THE BIOLOGICAL SECTION.

The section has to report a year of progress and prosperity.

The regular fortnightly meetings have been held throughout the year, and the attendance has been satisfactory.

A schedule is attached showing the papers read—22 in all.

As this section is to a large extent educational in its objects, it is not required that the papers read should be the result of original research, and we would welcome the assistance of some of the many members of the Institute who are well qualified to give us much information that would both interest and instruct.

The microscope which our last report mentioned as having been purchased but not then arrived, has been received, and by its means many points in the papers read before the section are illustrated, and the enthusiasm of those mem-

bers engaged in the study of minute forms of life, has been quickened. The microscopical curator will always be ready to attend meetings of the Institute, or other sections, when the use of the instrument is desired. A small collection of slides has already been secured for the section's cabinet, and more are expected.

Two years ago when the Institute contemplated the completion of the museum upstairs, this section became responsible for two years for the interest on the mortgage of \$1,000, which was given to raise the necessary funds, and we are glad to say that this has been paid, and the section is now free from debt or liability.

Not much progress has been made in our department of the museum. We merely desire to draw attention to the fact that biological specimens cannot be mounted without money, and that our section has absolutely no source of income except grants from the Council of the Institute.

W. E. MIDDLETON,
Secretary of Biological Section.

The officers for next year are: James H. Pearce, President; W. E. Middleton, Secretary.

SCHEDULE OF PAPERS.

1. E. E. Thomson.....*Canadian Birds.*
2. Rev. K. F. Junor.....*Echini.*
3. J. H. Pearce..... *Inaugural Address.*
4. M. Chamberlain.....*Canadian Birds.*
5. J. Noble.....*Mosses (First Paper).*
6. "..... " *(Second Paper).*
7. Wm. Brodie..... *Parasites of Potato Beetle.*
8. Wm. Brodie.....*Lemothrips Graminae.*
9. J. H. Pearce.....*Flowers (First Paper).*
10. "..... " *(Second Paper).*
11. W. E. Middleton.....*Fresh Water Sponges.*
12. J. B. Williams.....*Birds Observed in 1888.*
13. Wm. Brodie.....*Snakes.*
14. W. E. Middleton.....*Structure and Fructification of Ferns.*
15. C. Armstrong.....*Canadian Ferns.*
16. Wm. Brodie.....*Relation to Environment.*
17. E. E. Thompson.....*Winter Birds of Toronto District.*
18. J. H. Pearce.....*Moulds and Kindred Fungi.*
19. W. E. Middleton.....*Microscopic Mounting.*
20. James Noble.....*Plant Evolution.*
21. James Noble.....*Plant Development.*
22. A. Elvins.....*Volvox Globator.*

 REPORT OF THE PHILOLOGICAL SECTION.

Gentlemen.—I have the honor to present for your consideration the Third Annual Report of the Philological Section, for the year ending March 31, 1889. During the session the section has met regularly on the second and fourth Tuesdays of each month.

Following is a list of papers read at the various meetings :

- (1) April 10, 1888—"A Chart of Elocutionary Drill." By T. B. Browning, M. A.
- (2) April 24, 1888—"Volapük, the New World-Language." By D. R. Keys, B. A.
- (3) April 24, 1888—"On some words of Indian origin in the French Canadian Dialect and Literature." By A. F. Chamberlain, B. A.
- (4) November 13, 1888—"The language of the Mississaguas of Scugog, with special reference to Sematology." By A. F. Chamberlain, B. A.
- (5) November 27, 1888—"The Semitic Vowels." By Rev. Prof. McCurdy Ph.D.
- (6) January 8, 1889—"The Origin and Development of Grammatical Gender." By A. F. Chamberlain, B. A.
- (7) January 22, 1889—"Language Learning and Language Teaching." By William Houston, M. A.
- (8) February 12, 1889—"The Gaelic Vowel System." By David Spence, Esq.
- (9) " 26, 1889—"The Gaelic Consonants." " " "

During the month of March the section continued the investigation of the Gaelic Language introduced by the papers of Mr. Spence, of whose valuable assistance it was enabled to avail itself. On the 8th January, 1889, the Rev. J. F. McCurdy, Ph.D., resigned the office of chairman of the section, to which position Mr. D. R. Keys, B.A., was duly elected.

The officers for the ensuing year are:—Chairman, D. R. Keys, M.A.; Vice-Chairman, Jno. Squair, B.A.; Secretary, A. F. Chamberlain, M.A.

(Signed) A. F. CHAMBERLAIN,
Secretary Philo. Section, C. I.

 REPORT OF THE GEOLOGICAL AND MINING SECTION.

Gentlemen.—Very much interest continues to be manifested by the members of this section, in the study and discussion of those subjects which form the speciality of our organisation.

Mr. I
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SECTION.

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At the various meetings which have been held during the year, the attend-
e has been good.

At the first meeting of the sessional year, communications were read from
Department of the Interior, referring to measures taken by that Department
collecting and publishing statistics and other information on the mining and
allurgical interests of the Dominion, and enclosing a copy of an Order-in-
council on the same subject, approved by the Governor-General in Council; also
rring to an interview had by the chairman and secretary of this section, with
Deputy Minister of the Interior, on the subjects of (1) Prompt publication
the Survey's reports on mining affairs; (2) Coöperation of the Dominion and
vincial Governments in the collection of such information, and (3) Legislation
king the furnishing of such information compulsory.

In thus directing the attention of the authorities to an important subject,
section has been able to do good work, and recent publications of reports
ify the action taken by this section.

A number of interesting papers have been read during the year, and the
ussions arising therefrom have aided materially in familiarizing many with
ts relative to the minerals and mineral resources of our Province.

The Section has also taken much interest in the project of eastablishing in
s city a Provincial Mineralogical Museum, and trusts that its efforts in this
ection may yet be crowned with success.

Officers have been elected as follows for the current year:

Chairman—W. Hamilton Merritt.

Vice-Chairman—Arthur Harvey.

Secretary and Curator—David Boyle.

Managing Committee—R. W. Phipps, A. F. Chamberlain, A. Elvins, John
otman, P. H. Bryce, M.D.

The present year is confidently regarded by the section as likely to prove
ore than usually profitable to the section in all that relates to the investigation
d study of geology and mining in Ontario.

W. HAMILTON MERRITT,

Chairman.

ARTHUR HARVEY,

Vice-President.

DAVID BOYLE,

Secretary.

PAPERS READ DURING THE SESSION.

Mr. Harvey—"On Certain Lacustrine Deposits;" "On the Synclinal Trough
Lake Superior."

Mr. Merritt—"The Iron Ranges of Northern Michigan and Minnesota;"
Laurentian Formation of New Jersey, with relation to the Iron Mines therein."

Mr. Mills, of St. Ignace, Michigan—"Iron Smelting Furnaces."

2* (C. I.)

 REPORT OF THE ARCHITECTURAL SECTION.

Gentlemen—The members of the Section have met fortnightly during the Session, the meetings being chiefly occupied by instructive and interesting discourses, theoretic and practical, delivered by some of the prominent Architects and Master Mechanics of this city, who commended and encouraged the objects and motives of the Section, promising and offering us their entire sympathy and support.

The following were among the papers read and debated upon, being subsequently published in the *Canadian Architect*:

"The responsibilities of Students to their Profession," by R. R. Gambier Bousfield, A.R.I.B.A.; "Subsoil Irrigation," by E. Burke, Architect; "A Discourse on Carpentry," by R. Wilson.

Besides the papers and addresses, competitions were engaged in in designing Bay windows, Oriel windows, Entrances, etc.

At the close of the Session the following officers were elected: Robert Dawson, Chairman; Chas. D. Lennox, Treasurer; J. Fras. Brown, Secretary.

Yours verily,

J. FRAS. BROWN, *Secretary.*

 REPORT OF THE SOCIOLOGICAL COMMITTEE.

The Committee on Sociology begs leave to present its report for the year 1888-89.

1. Your Committee was constituted at the first meeting of Council this year and at once procured a circular, which appears in the last *Fasciculus* under the heading "Sociological Circular," to be drawn up, printed and distributed chiefly to the following classes of persons:

(1) Indian agents, farm instructors, inspectors, teachers in Indian schools in Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward's Island, Manitoba, the North-West Territories and British Columbia.

(2) Magistrates, inspectors of North-West Mounted Police, registrars, clerks of the peace, members of Council in North-West.

(3) Missionaries of the leading churches: Church of England, Roman Catholic, Presbyterian, Wesleyan.

More than a thousand copies have been distributed, so that your Committee is of opinion that the circular has found its way to most persons in the Dominion who are interested in Indian questions.

2. Your Committee has received material assistance from the Hon. Edgar Dewdney, Superintendent-General of Indian Affairs for the Dominion, the Hon. A. S. Hardy and the Hon. G. W. Ross, Ministers respectively of Crown Lands and Education of Ontario; is deeply indebted to the newspapers, educational, religious and legal press of Canada for bringing the subject to the attention of the public, and for extended and favorable notices of the Committee's work; also to the following periodicals: Magazine of Western History, Popular Science Monthly, Journal of Anthropology of the United States, Historical Review and Law Quarterly of England.

3. At the request of your Committee the Canadian Pacific Railway has kindly consented to carry archaeological and natural history specimens free of charge for the Institute.

4. The publication of the Indian Treaties of Canada and the Provinces has engaged the attention of your Committee. The Council and Institute will, no doubt, be pleased to learn, from the accompanying letter of Mr. Vankoughnet, that this important work is under way and will shortly be completed. The correspondence on the subject is herewith submitted. Copies of the Dominion Reports on Indian Affairs from 1875 up to and inclusive of 1888 have been received for the use of the Institute, for which your Committee has duly returned its thanks to the Superintendent-General.

5. In reply to the circular a number of letters and abstracts have been received, among them

(1) A short abstract from the Rev. T. S. Cole, B.A.

(2) An interesting letter from Inspector A. Bowden Perry of Prince Albert, North-West Territories, which your Committee begs to submit to the Editorial Committee for publication, together with a detailed paper on

(3) "The Western Déné," by the Rev. A. G. Morrice, O.M.

A number of other papers are promised, principally by reverend gentlemen whose duties bring them into direct contact with the Indian population of Manitoba and the North-West.

6. Your Committee begs leave to reserve such remarks of a sociological nature as it may desire to make for the separate papers as they appear, suggests that the circular be re-issued with such alterations and additions as may seem proper, and entertains the hope that the success which has accompanied its efforts this year will be redoubled in the year to come to the common benefit of the Institute, its members and the country.

All which is respectfully submitted on behalf of the Committee.

T. B. BROWNING,
Chairman.

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ARCHÆOLOGICAL REPORT.

BY DAVID BOYLE.

To the President and Members of the Canadian Institute:

GENTLEMEN,—It is gratifying to be able to state that the interest in archaeological matters has increased very considerably throughout the province, since the inception of our scheme to place ourselves as nearly as possible abreast of other countries in this respect. The hope expressed in our first report, that "its appearance would tend to arouse a more general interest in the subject," has thus been realized. The activity, however, has been mainly displayed in the work of collecting. Old collectors have been encouraged to go on, and many new ones have entered the field. On this account there is no doubt that much valuable material will be preserved, which otherwise would have been lost, but as a consequence, there is now greater difficulty in adding specimens to our collection. Ultimately, it is probable that many amateur lots will find their way to the provincial museum, and already several assurances have been given to this effect by individual collectors. Another good result arising from our project, is the very general determination arrived at by almost all who pick up specimens, not to let them go out of the country. In a few instances collectors seem to be mainly actuated by mercenary motives, but as a rule they are really *amateurs*. Among the latter are some who take the broad, public-spirited view, that it is better to place their "finds" in a large collection, where every one may see them, than to retain them at home for merely personal gratification.

On a list of such for the past year, the Institute must place the names of Messrs. R. W. Reavley, B.A., Teacher, Tilsonburg; R. D. George, Teacher, Fonthill; William and David Melville, Creemore; Dugald Carrie, Teacher, Creemore; Cyrenius Bearss, Sherkston; Wm. Michener, Sherkston; Isaac and Ezra Bearss, Sherkston; John N. Boyle, Braeside, Richmond Hill; Dr. R. Orr, Maple; William and Robert Loughed, Smithdale; Herbert and Theophilus Connor, Glenhuron; Thomas White, Cashtown; Thomas Boon, Botlwell; Mrs. Barney, senior, Sherkston; Geo. Muma, Humberstone; Mr. John McPherson, Toronto; Miss Kirkwood, Toronto; Wardie and Ottie White, Toronto; Joseph Smelser, Vaughan; Luke Mullock, Waterdown; Major J. M. Delamere, Toronto; Wm. Welsh, Amberley; Rev. John McLean, Moosejaw, N. W. T.; Angus Buie, Nottawasaga, and Clarence Bell.

Thanks are also due to a large number of persons in various parts of the province, who have supplied information of great value. The names of some of these gentlemen, with a statement of the results arising from their communications, will be found in the present report. In other cases the work remains to be done.

Owing to some misunderstanding, the number of reports printed last year was considerably less than for the year previous. On this account I believe that even the members of the Institute were not supplied with them, and many applications for copies have had to be refused. This year it is hoped that a large enough number will be struck off, to supply all who are interested.

I have already stated that the increased archaeological activity recently displayed among amateurs, has manifested itself chiefly in the work of collecting. This is good so far as it goes, but does not accomplish what is required from the Institute's standpoint. For present and future use are demanded at least moderately accurate surveys of all aboriginal locations, with drawings of fortified works, and exact data relating to materials, patterns, depths, soils, ash-heaps, position of bodies, with particulars relating to skulls, modes of burial, presence or absence of European influences, and many other details requiring experience, time and labor to record satisfactorily.

Mr. A. F. Hunter has devoted considerable time and done a good deal of travelling for the purpose of locating villages, potteries and ossuaries, in townships formerly occupied by the Hurons. His paper on that district is exceedingly interesting, and will enable any future explorer with "reasonable means," to economize time in making a more detailed survey, or in excavating for relics.

Having begged permission from Dr. Francis Parkman, the historian, to quote from his works for use in this report, in connection with the work done in Simcoe county, a prompt and courteous reply was received from that gentleman, granting the favor asked. In this note Dr. Parkman wrote:

"I infer from what you write, that you are making investigations in the old Huron country. Should the result be printed, I should be glad if you would let me know of it."

Copies of our two former reports having been mailed to him, he afterwards wrote:

"Thank you for the two reports of the Canadian Institute which you have kindly directed to be sent me. It is certainly in the power of the Institute if it has reasonable means at its disposal, to do good service to American archaeology, by exploring the Indian remains of Ontario, and above all those of the old Huron country, including that of the Tobacco nation. I am glad a beginning has been successfully made in this direction, and hope that the Institute will be enabled to continue its work, before the spread of settlement makes such researches difficult or impossible.

"Yours very truly,

"F. PARKMAN.

"Boston, 3rd July, 1889"

It is inspiring, even inspiring, to know that we have the countenance of so high an authority, the very highest in fact, in all that appertains to the history of American and more especially (so far as we are concerned), of Canadian Indians. No one better than he can fully estimate the value of such investigation, in their bearing upon the past and present European relations of the Aborigines to the history of our country, for no one else has devoted so much of a busy life-time to the patient, arduous and scholarly study of Canadian colonial development, the results of which are embodied in a series of volumes, that are perhaps unequalled in the historic literature of any other land in the world.

It would be difficult to conjecture what Dr. Parkman regards as "reasonable means" at the disposal of the Institute, whereby "to do good service to American archaeology," and he would probably be incredulous were he informed as to the smallness of the sum that has been spent by us in three years, for the purpose in question—a sum which has covered payment of services, travelling expenses, employment of manual labor, purchase of specimens, express and freight charges, supply of show cases, printing of circulars and labels, postage and engraving.

During the meeting of the American Association for the Advancement of Science, many of the most distinguished ethnologists and archaeologists on this continent, examined our collection of illustrative specimens, and their remarks on the extent and character of the museum were such as to afford the Institute satisfaction with what has been accomplished, as well as encouragement for future prosecution of work in the same direction.

Prof. Putnam, of the Peabody museum, which has one of the largest collections of this kind in the United States, said that in proportion to its size, our museum contained a greater variety of unique and instructive specimens, than any other he had ever seen.

Dr. Abbott, of Trenton, New Jersey, expressed himself as being especially pleased with the contents of the cases containing ornaments and implements of bone.

Rev. Mr. Beauchamp declared that our collection of stone "bird-amulets" was superior to anything of its kind in any American museum.

Prof. Morse, of the Essex Institute, Mass., was surprised to see the variety of pottery patterns.

Several of the visitors recorded their opinions on the pages of our register, and from these the following are quoted:

Mr. A. E. Douglas, of the Museum of Natural History, New York, wrote:—"I consider this collection is almost unique in objects of great interest to archaeologists." Mr. Douglas is himself, the owner of one of the largest private collections in America. It is on permanent exhibition in the New York museum.

The Rev. W. M. Beauchamp, of Baldwinsville, New York, and an *attaché* of the Smithsonian Institute, Washington, expresses himself as follows:—"I have been greatly pleased and profited by examining the valuable collection of Indian articles in the Canadian Institute, among which are some that are beyond price to an antiquarian, and will prove of the highest use in solving some questions of early history. Ontario will soon have reason to be proud of such treasures." Mr. Beauchamp is now employed in getting together for the Smithsonian Institute just such information relative to the Hurons, as Mr. A. F. Hunter and myself employed a portion of the past season in procuring for the Institute.

Mr. Chas. W. Smiley, who is also connected with the Department at Washington, wrote:—"Here is a fine collection, which we should appreciate in Washington very highly. Whatever more can be obtained and added before it is too late, should be secured *at once*. Unless Ontario gather up her scattered materials soon, they will be taken away to enrich museums abroad. Now or never!"

Few persons are better qualified than Dr. C. C. Abbott, of Trenton, New Jersey, to express an intelligent opinion in relation to matters of this kind. He has devoted many years to archaeological study, and is the author of several works on the subject. His immense private collection is on view at the Peabody Museum, Cambridge, Massachusetts. Dr. Abbott has left us the following record:—"I have examined the archaeological collection of this Institute, and am delighted with it. Its value for scientific purposes is very great, and already there is gathered here the material for comparative study, so much needed by students of archaeology. Collections of given areas as complete as possible, are the requirements for finally solving the problem of North America's aboriginal peoples; and I earnestly pray that not only the citizens of Toronto, but the Provincial Government, will be exceedingly liberal in assisting those who have made so admirable a collection as is here brought together."

The time of Prof. Putnam was so fully occupied in the performance of his duties as secretary of the A. A. S., that he had but little leisure to do more than make a few brief visits to the museum. The following sentence however, may be quoted from what he has written:—"I have found here very much of importance to me in my study of the skulls of American peoples." Prof. Putnam ranks among the first of American ethnologists and archaeologists, and it was exceedingly gratifying to receive from him, both orally and in writing, so high an opinion of the work that has been done.

It is a matter of some regret that Prof. Putnam's visit to the city did not occur a few weeks later, as during that time we more than doubled our collection of crania, several specimens of which exhibit notable peculiarities, one at least having the Inca bone well marked.

"THE LAND OF SOULS."

"We come from the Land of Souls, where all is sorrow, dismay, and desolation. Our fields are covered with blood; our wigwams are filled, but with the dead, and we ourselves have only life enough left to beg our friends to take pity on a people drawing near their end." Petition of the Hurons to the Andastes in 1647. Raguenaud, *Relation des Hurons*.

The vast number of communal and other burial places that may still be traced over the area formerly occupied by the Hurons, evidence the density of the aboriginal population and afford a reason for the poetic title given by the natives to their dying country, when they besought their kindred on the Susquehanna for assistance, nearly two-hundred and fifty years ago.

Having spent considerable time last June in the township of Nottawasaga for the purpose of mapping the district, marking the ancient village sites and ossuaries, and collecting specimens, I cannot do better than quote from Parkman, a brief description of that land and its people.

"In the woody valleys of the Blue Mountains, south of the Nottawasaga Bay, of Lake Huron, and two days journey west of the frontier Huron towns, lay the nine villages of the Tobacco Nation, or Tionnontates;* In manners as in language they closely resembled the Hurons. Of old they were their enemies, but were now at peace with them, and about the year 1640 became their close confederates. Indeed in the ruin which befel that hapless people, the Tionnontates alone retained a tribal organization; and their descendants, with a trifling exception, are to this day the sole inheritors of the Huron or Wyandot name. Expatriated and wandering, they held for generations a paramount influence among the western tribes. In their original seats among the Blue Mountains, they offered an example extremely rare among Indians, of a tribe raising a crop for the market; for they traded in tobacco largely with other tribes. Their Huron confederates, keen traders, would not suffer them to pass through their country to traffic with the French, preferring to secure for themselves the advantage of bartering with them in French goods at an enormous profit." †

If other reasons were wanting, the facts cited in the foregoing quotation are sufficient to interest us in all that pertains to a people so exceptional in many respects to other aborigines inhabiting this part of the continent. The axe and

* The district formerly occupied by the Tobacco Nation, and now included within the limits of Collingwood, Nottawasaga and Sunnidale townships, held, within recent geological time, a very different relation to the great fresh water sea from what it does at present. The proofs are everywhere abundant that the valley drained by the Nottawasaga River was at one time a prolongation of Nottawasaga Bay, connecting the waters of Lake Huron and Lake Simcoe, and bounded westwards by the gentle slopes of the "Blue Mountains," so-called; for the term is a misnomer, where we take into account that these elevations seldom if ever exceed 500 feet, above the lake level, and are cultivated from base to crown.

† Parkman, *The Jesuits in North America*. Introduction, p. xliii, 21st edition. Boston, 1885.

the plow are rapidly removing every land-mark; already many have been obliterated, but a large enough number remain to attest the truth of all that has been stated regarding the population, which was reckoned at from twenty thousand to thirty-five thousand.*

If we regard the nine villages or towns of the Tionnontates or Tobacco Nation, as having been of average population with the remainder of the thirty-two all of which were reckoned in 1639, to contain thirty thousand souls, it would appear that the population of the Blue Mountain district was not less than five thousand five hundred, but if we make allowance for the agricultural habits of the Tobaccos and their consequently less persistent warlike proclivities, it is probable that the number of the people fell little short of eight thousand, about the year 1640.

Even with half that number the country of the Tobacco Nation must have been well populated, when it is borne in mind how large an area is required for the support of those who depend more or less on the results of the chase for their livelihood.

Some of the ossuaries, or communal burial pits have been estimated by intelligent settlers who have opened them, to contain from five hundred to fifteen hundred skeletons. Making due allowance for exaggeration in viewing the spectacle of immense quantities of bones, without any effort to assort them or otherwise make an exact count, it seems to be capable of proof, that fully a thousand skeletons have been found in a single pit. One settler informed me that he had counted upwards of nine hundred skulls almost whole, and assured me that there must have been from one hundred to two hundred others in a fragmentary condition. Dr Taché of Quebec, writing to Dr. Parkman, says, "I have inspected sixteen *bone-pits*. * * * * *

They contain from six hundred to twelve hundred skeletons each." Most of these ossuaries, known locally as "bone-holes," are of post-European date and contained copper or brass kettles. Here, as in the township of Beverly (mentioned in a former report,) the pioneer settlers, or some of them rather, made it their business to open every known grave-pit, for the purpose of procuring these utensils, sometimes to the number of twenty or more from one place. All those I opened last summer had been previously ransacked, and I think I am safe in saying that it is now almost impossible to find within the ancient limits of the Tobacco Nation, or indeed any where in the old Huron country, an ossuary that has been left undisturbed.

Even, however, at the time when these burial-pits were first opened, many of them were totally devoid of anything save promiscuously interred bones, and we are thus brought face to face with the fact that it was *not* the invariable custom of the aborigines to deposit tools, utensils and ornaments with human remains, at any rate, during the latter days of savage existence in this part of the world. That the custom was much more prevalent in former times there is little doubt, but it is my own experience as well as that of others, that graves evidently of prehistoric date have been found wholly destitute of material for the use of the departed spirits. This may be accounted for either on the supposition that the bodies were hastily interred after some bloody affray, and in proximity to the enemy, by those who were defeated, or, that those who succeeded in maintaining

* "The number of the Huron towns changed from year to year. Champlain and Le Caron, in 1615, reckoned them at seventeen or eighteen, with a population of about ten thousand, meaning, no doubt, adults. Brébeuf, in 1635, found twenty villages, and, as he thinks, thirty thousand souls. Both Le Mercier and Du Quen, as well as Dollier de Casson and the anonymous author of the *Relation* of 1690, state the population at from thirty to thirty-five thousand. Since the time of Champlain's visit, various kindred tribes, or fragments of tribes, had been incorporated with the Hurons, thus more than balancing the ravages of pestilence which had decimated them."—Parkman, *Jesuits in North America*. Introduction—note, p. xxv.

their ground after an engagement thus buried the slain of the discomfited party. I am not aware that any such record exists, but nothing can be more reasonable than to conclude that the victors would hasten to bury the bodies of those who had been killed, especially when the fighting had taken place as it so often did at, or close to, a village, and when it involved less trouble and inconvenience to bury the dead than to strike camp and leave the bodies exposed. In the Huron country this must frequently have been a powerful reason, where clearings were made for simple agricultural purposes, and dwellings were erected of a more permanent type than that of the Indian who subsisted altogether by hunting.

Another reason suggests itself, namely, that numerous deaths as the result of sickness or war may have so depleted the living of personal property that nothing in many cases was left for mortuary offerings.

Account for it as we may, it is well at all events to disabuse the popular mind of a fallacy that has been confirmed by so many writers, leading to the belief that every Indian grave necessarily contains objects of human workmanship.

Nevertheless, the great feast of the dead was an occasion of vast importance when conducted according to traditional custom, and occurring as it did at intervals of several years. Brébeuf in 1636, was the first to describe fully the ceremonies attendant upon a communal burial at Ossossané or La Conception, the site of which was not far from the present village of Wyevale. The people inhabiting this district were the Attignaouentans or Bear Nation, of the Huron confederacy, among all the members of which the practices were similar. From the *Relation* of Brébeuf, and from other sources we are tolerably well informed with regard to the ceremonies in question. Dr. Parkman's vivid rendering of Brébeuf's description may be quoted: "The body was usually laid on a scaffold, or, more rarely in the earth. At intervals of ten or twelve years, each of the four nations * which composed the Huron confederacy gathered together its dead, and conveyed them all to a common place of sepulture. Here was celebrated the great 'Feast of the Dead,'—in the eyes of the Hurons, their most solemn and important ceremonial. * * * * *

"The corpses were lowered from the scaffolds and lifted from their graves. Their coverings were removed by certain functionaries appointed for the office, and the hideous relics arrayed in a row, surrounded by the weeping, shrieking, howling concourse. The spectacle was frightful. Here were all the village dead of the last twelve years. * * * Each family reclaimed its own, and immediately addressed itself to removing what remained of flesh from the bones. These, after being tenderly caressed, with tears and lamentations, were wrapped in skins and adorned with pendent robes of fur. In the belief of the mourners they were sentient and conscious. A soul was thought to still reside in them; and to this notion, very general among the Indians, is in no small degree due that extravagant attachment to the remains of the dead, which may be said to mark the race.

"These relics of mortality, together with the recent corpses, which were allowed to remain entire, but which were also wrapped carefully in furs, were now carried to one of the largest houses and hung to the numerous cross-poles, which, like rafters, supported the roof. Here the concourse of mourners seated themselves at a funeral feast; and as the squaws of the household distributed the food, a chief harangued the assembly, lamenting the loss of the deceased and extolling their virtues. This solemnity over, the mourners began their march for Ossossané, the scene of the final rite. The bodies remaining entire were borne on a kind of litter, while the bundles of bones were slung at the shoulders of the

* The Tobacco Nation similar in language and manners, did not join the Huron confederacy until about 1639-40.

relatives like fagots. Thus the procession slowly defiled along the forest paths with which the country of the Hurons was everywhere intersected; and as they passed beneath the dull shadow of the pines, they uttered at intervals, in unison, a dreary, wailing cry, designed to imitate the voices of disembodied souls * winging their way to the land of spirits, and believed to have an effect peculiarly soothing to the conscious relics which each man bore. When, at night, they stopped to rest at some village on the way, the inhabitants came forth to welcome them with a grave and mournful hospitality.

"From every town of the nation of the Bear processions like this were converging towards Ossossané. This chief town of the Hurons stood on the eastern margin of Nottawasaga Bay, encompassed with a gloomy wilderness of fir and pine. * * * The capacious bark houses were filled to overflowing, and the surrounding woods gleamed with camp fires: for the processions of mourners were fast arriving, and the throng was swelled by invited guests of other tribes. Funeral games were in progress, the young men and women practising archery and other exercises for prizes offered by the mourners in the name of their dead relatives. Some of the chiefs conducted Brébeuf and his companions to the place prepared for the ceremony. It was a cleared area in the forest many acres in extent. In the midst was a pit about ten feet deep and thirty feet wide. Around it was reared a high and strong scaffolding, and on this were planted numerous upright poles, with cross-poles extended between for hanging the funeral gifts and the remains of the dead.

"Meanwhile there was a long delay. The Jesuits were lodged in a house where more than a hundred of these bundles of mortality were hanging from the rafters. Some were mere shapeless rolls, others were made up into clumsy effigies adorned with feathers, beads, and belts of dyed porcupine quills. * * * At length the officiating chiefs gave the word to prepare for the ceremony. The relics were taken down, opened for the last time, and the bones caressed and fondled by the women amid paroxysms of lamentation. Then all the processions were formed anew, and each bearing its dead, moved towards the area prepared for the last solemn rites. As they reached the ground they defiled in order, each to a spot assigned to it on the outer limits of the clearing. Here the bearers of the dead laid their bundles on the ground, while those who carried the funeral gifts outspread and displayed them for admiration of the beholders. Their number was immense and their value relatively very great. Among them were many robes of beaver and other rich furs, collected and preserved for years with a view to this festival. Fires were now lighted, kettles slung, and around the entire circle of the clearing, the scene was like a fair or caravansary. This continued till three o'clock in the afternoon when the gifts were repacked and the bones shouldered afresh. Suddenly at a signal from the chiefs, the crowd ran forward from every side towards the scaffold, like soldiers to the assault of a town, scaled it by rude ladders with which it was furnished, and hung their relics and their gifts to the forest of poles which surmounted it. Then the ladders were removed and a number of chiefs, standing on the scaffold, harangued the crowd below, praising the dead and extolling the gifts, which the relatives of the departed now bestowed in their names upon their surviving friends.

"During these harangues other functionaries were lining the grave with robes of beaver skin. Three large copper kettles were next placed in the middle and then ensued a scene of hideous confusion. The bodies which had been left entire were brought to the edge of the grave, flung in, and arranged in order at the bottom by ten or twelve Indians stationed there for the purpose, amid the wildest excitement and the uproar of many hundred mingled voices. When this part of

* It is not easy to conjecture where they got their model for this imitation.

the work was done night was fast closing in. The concourse bivouacked around the clearing and lighted their camp-fires under the brows of the forest, which hedged in the scene of the dismal solemnity. Brébeuf and his companions withdrew to the village, where an hour before dawn, they were roused by a clamor which might have wakened the dead. One of the bundles of bones, tied to a pole on the scaffold had chanced to fall into the grave. This accident had precipitated the closing act and perhaps increased its frenzy. Guided by the unearthly din and the broad glare of flames fed with heaps of fat pine logs, the priests soon reached the spot, and saw, what seemed in their eyes, an image of Hell. All around blazed countless fires and the air resounded with discordant outcries. The naked multitude on, under and around the scaffold, were flinging the remains of their dead, discharged from their envelopments of skins, pell-mell into the pit, where Brébeuf discerned men who, as the ghastly shower fell among them arranged the bones in their places with long poles. All was soon over, earth, logs and stones were cast upon the grave and the clamor subsided into a funereal chant, so dreary and lugubrious, that it seemed to the Jesuits the wail of despairing souls from the abyss of perdition.*

This most vivid and succinct description of one great burial ceremony may be regarded as being applicable in a general way to all other great feasts of the dead. It is probable that the various nations, composing the confederacy, differed to some extent in matters of detail, and there is reason to believe that in at least one important particular, the Tobacco Nation differed from the Hurons proper. Referring to the first disposal of the dead, as may be gathered from the foregoing extract, Dr. Parkman says, "The body was usually placed upon a scaffold, or, more rarely, in the ground." When we bear in mind the settled habits of the Tionnontates or Tobaccos and the somewhat limited area they had to occupy, we can readily see that the scaffolding of dead bodies was not so well adapted to them as to peoples who led a roving life over vast extents of country. I have accordingly found numerous evidences that among the Tobacco Nation, inhumation, was the prevalent, if not the sole mode of preliminary disposal. On many of the farms in the Blue Mountain district, the plough has brought to light human remains that had been laid in graves singly, and not far below the surface. On lot 19 of the 7th concession of Nottawasaga, Mr. Edward Beecroft informed me that there were on the front or west end of the farm about one hundred single graves, and twice that number on the rear of his property. On the same lot an extensive village had been situated judging by the numerous deep and widely spread beds of ashes, while not far away the manufacture of clay vessels and pipes had been carried on, as is shown even yet by proofs of the most unmistakable kind. There is a large ossuary on the same farm within a short distance of the village site.

If, therefore, we regard the existence of the village as having been contemporaneous with the individual graves, and there is no reason to doubt this, we can understand why inhumation was preferable to scaffolding.

In the account of the great communal burial, quoted from Parkman, reference is made to the topography of the "cleared area in the forest, many acres in extent," and "in the midst [of which] was a pit, about ten feet deep and thirty

* Parkman, *Jesuits in North America*. 21st ed. Boston 1885. p. 72 *et seq.*

It is to be remembered that the description given by Brébeuf, is that upon which are based all the popular notions regarding Indian burials in this country. On the occasion in question there was considerable dissension among the Attignouontons, or Fear Nation, whose feast of the dead he witnessed. A respectable minority consisting of three or four towns, refused to take any part with the others in this ceremony, and declared their intention to conduct one independently. This naturally caused ill-feeling between the dissentients and we are therefore warranted in assuming that on this account, those with whom Brébeuf was present conducted the proceedings with much more "braverie" than was their wont. No doubt the succeeding towns were actuated by similar motives. Is it right then, to regard this as having been a normally typical burial?

feet wide," but is to be noted that these burial pits are almost invariably found on the top of knolls and hills; generally the highest ground within easy reach of the town or village.* Was this practice in any way connected with the mound-building predilections of other tribes? Did our northern Indians cease to throw up great earth heaps for such a purpose because they found so many of natural formation? Does the construction of mounds by people occupying more level areas in any way indicate the persistence of a habit formed by their ancestors in some hill country? Or are both practices but the survival of some ancient custom of religious or other significance derived from common predecessors?

During the time I spent the township of Nottawasaga, I endeavored to ascertain the position of every known locality associated with the Tionontates, and succeeded in being able to mark upon the map ten village or town sites, twenty-one ossuaries, one fortified place, and three potteries. There are no doubt other places of which nothing could be learned, as the first settlers on many farms are now dead, and every surface trace has been removed in the course of cultivation. In almost every case I examined the places, and found in only two instances that spots which had for many years been popularly regarded as "bone holes," were but natural depressions, caused probably by the infiltration of water through the sandy subsoil which was little more than a foot below the surface.



* I have met with only one instance of a grave on low land. This is situated in the township of Humberstone, within a short distance of Lake Erie. The flat, near the middle of which the grave has been made, is of several acres in extent, and almost surrounded by sandhills of considerable height, from forty to sixty feet. Although pipes and other relics of Indian production have been found in this ossuary, it is suspiciously connected with "white" origin, as some of the skulls taken from it, and now in our possession, appear to be those of Europeans.

A reference to the map-diagram will show that all the locations marked extend in a direction from north-west to south-east, that is to say, corresponding with the range of hills that stretch through the township of Nottawasaga. The hills extend into Collingwood and Osprey townships, but time did not permit of these places being visited. The whole of this neighborhood should be examined carefully, as soon as possible for much of it is no doubt quite as valuable archaeologically as any other portion of the Nottawasaga Bay district.

Beds of ashes, blackened earth, fragments of pottery and bone, flint flakes and sometimes charred corn-cobs mark the village sites. Dr. Taché is said to have prepared a map of the Huron country (including probably the Tobacco Nation,) by means of which he thought he could identify many places with those mentioned in the *Relations*, but I am informed by Mr. Douglas Boymner, Dominion Archivist, that it has never been published.* A few of the places showing traces of habitation seem to have been mere temporary camping-grounds, where the quality of the clay and the proximity of water afforded facilities for the making of pottery and pipes; others, however, judging by their extent and the depth of the ash-beds seem to have been more permanent abodes.

One of the most interesting of these village sites is on the farm of Mr. William Melville, north half of lot 10, concession 5. The proprietor informed me that in the course of ploughing over this place he had turned up large quantities of corn and corn-cobs. William and David Melville, his sons, both intelligent collectors, have picked up several whole and fragmentary pipes, a few stone and shell beads, and an excellent bone chisel upwards of eleven inches in length.† All of these they presented to our collection.

On lot 12, concession 7, is the famous Lougheed farm, from the old site on which so much valuable material has been mentioned and figured in former reports. This year again we are indebted to Master Lougheed, for some very good specimens.

Two other villages occupied what are now respectively the north half of lot 11, concession 8, and the south half of lot 11, concession 9; immediately north of the former, on lot 12 concession 8, is an ossuary, and west of the latter on the same lot there is another. About midway between these and Mr. Melville's farm there is an ossuary on lot 10, concession 7.

Due east of the Lougheed farm, on the property of Mr. Thos. White, lot 13, concession 1, there are extensive indications of former residence. Broken pottery is plentiful and pipes of stone and clay have been found. Mr. White presented the Institute with several good specimens from his farm, chief among which is a well made bone chisel nearly a foot long. From the son of Mr. Ed. Coyle, on the adjacent farm, in the township of Sunnidale, we received some clay pipes found on Mr. White's property.

South of the White farm, there is an ossuary on lot 12, concession 1.

* A rude map purporting to show the topography of the Huron towns as they were in 1660, was published in the Canadian Journal, for November, 1857, to accompany a paper by Mr. John Langton, "On the Early Discoveries of the French in North America." It is too confused to be worth much, beyond enabling us to see that St. Michael was south of St. Louis, or St. John north of St. Ignatius, information that may be obtained more satisfactorily elsewhere. This map showing Creuxius' topography, is from Ducreux's *Histoire Canadienne*, Paris, 1664. The Rev. Mr. Annis, of St. Thomas, claims to have located a few of the old Huron towns, but owing to the transient character of these Indian habitations, it seems impossible that we should ever be able to fix with certainty the spots occupied at different times by the same people, and always known by the same names.

† Since this was written, Ah-yand-wah-wa, Ma-shuck-ah-wa-wong and John Settee, intelligent and educated representatives of the Ojibewa and Cree tribes on the Lake Winnipeg Reserve, paid several visits to the museum. They informed me that similar instruments are still used among their people for skinning purposes.

On the south half of lot 16, concession 4, and the north half of lot 16, concession 6, are ossuaries.

West of these on the lot 16, concession 8, the property of Mr. Conner, there is a village site from which his sons, Herbert and Theophilus have collected a good many specimens all of which they have sent to form part of our collection.

A little to the north, lot 19, on the same concession, is the Beecroft farm, on which are a village site, a pottery and a grave-pit, besides about three hundred single graves.

On lot 21, concession 9, is a village site, and on lot 22, immediately north, an ossuary.

Another village site is on lot 22, concession 5, the farm of Squire Currie, and not far away to the south-west are three ossuaries on the farm of Mr. John Edmonds, lot 21, concession 6.

There has been a village on lot 26, concession 10, on this lot there is also an ossuary.

Other ossuaries exist on lot 24, concession 7; lot 25, concession 8; lot 27, concession 10; lot 29, concession 10; and lot 30, concession 12.



On the farm of Mr. Wm. Anderson, north half of lot 23, concession 9, traces of an old village are visible on the face of, and near the top of a hill sloping towards the west, and at the foot of which runs a small stream known as Darroch's Creek, flowing into the larger Batteaux Creek. At this point Darroch's Creek makes a bend almost semi-circular and nearly encloses a strong spring. Between the base of the hill and the creek the land is low and level. From the extremities of the bend, banks have been thrown up stretching towards the high land. That to the north is now barely discernible, but the one on the south side can be easily traced for a distance of fifty-five yards, inclusive of its windings. In the construction of such earthworks no regularity was observed. When the nature of the ground offered any advantage the line of embankment was adapted to it, but in this case

the curves were evidently made to extend from one large tree to another; one of these is still standing, the others have disappeared, either in the partial clearing that has taken place, or in the course of nature. I was unable to discover whether this embankment had been palisaded, as I believe it was, if we suppose the construction of it had anything to do with the protection or defence of the spring.

The situation of this earthwork is remarkable. Usually we find embankments thrown up on higher ground, and serving to protect habitations; here the village was on the hill face, and overlooking the fortified enclosure. Perhaps the embankment originally extended up the hill, so as to surround the village. If so, it has disappeared during years of tillage.

The irregularity of the work points to a time anterior to French influence, for according to Brébeuf, the missionaries taught the natives of that neighborhood how to construct regular fortifications, having bastions and other European devices for defensive and offensive purposes.

Previous to this their palisaded embankments must have been far from strong, notwithstanding the enormous labor that was required to make them. The ground selected as a fortified dwelling place, was usually chosen on account of its natural advantages for defence, usually high ground at the confluence of two streams, or on a point formed by the sharp bend of a river. But other conditions were desirable. The soil should be loose and easily tilled; good clay for pottery and pipes should be within easy distance; the proximity of nut-bearing trees was not over looked, and a good spring of water was almost indispensable, for it is worthy of note that the Indians were evidently partial to spring water. Perhaps one reason may be found for this preference in the non-freezing quality of springs during winter. Another was no doubt the coolness of the water in summer, but in the depraved condition of their taste it is not likely they were influenced by any consideration of purity or flavor.

As has already been remarked, the labor required to build and fortify a village must have been enormous, and this mainly on account of the primitive tools employed. For edge-tool purposes stone was the chief material, copper more rarely. To effect a clearing of from five to ten acres in extent, fire was therefore to them a powerful agent, as indeed it is even to the white settler who is well provided with all "modern conveniences." Kindling a fire at the root of a tree, the charred wood was removed from time to time with their stone axes, so many of which are found all over this province, in common with many other places on the continent. These implements, of which small specimens are usually called "skinning tools," were fastened to withe or to crotched handles. They were generally plain, decreasing slightly in size towards the head or pole. This shape caused them to tighten in the handle when a blow was struck. The grooved axe was a much more elaborate affair, and few of them are found either in the Huron country or elsewhere in Ontario.

The work of clearing finished, much more of a similar kind had to be done, to procure the large number of small poles to form the walls of their houses, and larger ones for the palisading, unless we assume that many such were saved during the great burning. To dig holes for the reception of these must have been tedious and difficult. Splinters of wood, pieces of bark and flat stones served for picks and shovels. Then the earth had to be thrown up round the outside of the wigwam or the "longhouse," and a ditch two or three feet deep dug along the whole line of the palisades, both outside and inside, and thrown up to form a breastwork as well as to strengthen the hold of the posts in the ground. It is to be remembered too, that these posts were sometimes in two, three, or even four

parallel rows, those on one side of the embankment inclining towards those on the other, and crossing at the top where they were lashed to each other with pliable twigs and strips of tough bark. A platform of poles was laid to extend lengthwise, resting at the intersection of the palisades, and here it is said the defenders stood to pour water upon fires lighted by the besieging force to make a breach in the "wooden wall." Here also heaps of stones were piled, for use against the enemy at close quarters. In addition to the labor of erecting such a frame, the finishing touches must also have required much time and patience, for the palisades were covered to the height of six feet or more, with sheets of bark. As a whole, and considering the lack of good cutting tools, we cannot fail to be surprised at the amount of work the Hurons and other Indians accomplished, and the manner in which it was executed, although it would appear that in the art of fortification, the Hurons were excelled by their kindred the Iroquois.*

With regard to the extent and number of the aboriginal clearings in the Tobacco Nation's country, there has probably been some exaggeration. One writer has given it as his opinion that almost every square yard of land in that district, shows signs of a former clearance. It would be interesting to know what these signs were that persisted in showing themselves, after a lapse of two hundred years, now two hundred and forty. A farmer on whose property there is an old village site, told me that the trees growing upon it had smoother bark than those in the surrounding woods. I failed to observe the difference, but allowing it to be as represented, it proves too much, for even if the richer soil produced a finer bark, the coarser covering of the surrounding trees yielded no evidence of such an advantage. It is chimerical after so long a time, to look for surface indications of this kind, where the upturned roots of trees from three to four feet in diameter, sometimes disclose flakes of flint, broken pipes and fragments of pottery.

Still it is plain that the agricultural operations of the Tionontates were comparatively extensive, for the density of the population made game scarce, and their chief food consisted of maize or Indian corn, raw or roasted, or boiled with flesh and fish. This grain they stored in caches or pits. The only evidence now existing of the use of corn are the charred cobs and grains found among the ashes of old dwellings.

Our knowledge of aboriginal vegetable diet is not very extensive, but it would appear that in addition to maize, they cultivated sunflowers, pumpkins and beans, all of which were probably introduced from southern sources. Wild fruits, especially plums, were moderately plentiful about the Georgian Bay, and the district is at the present time noted for its cultivated varieties of this fruit. Cherries, gooseberries, raspberries and strawberries, though not abundant were no doubt added to their scanty list of tid-bits, and beech-nuts could sometimes be gathered in considerable quantities. They no doubt made use of maple sap during early spring, but their traditional manufacture of sugar by boiling is a little dubious.

From a coarse hemp the women twisted strong cord or twine, which was used chiefly in making nets and constructing wigwams. From coarse grasses and sedges they wove mats and articles of clothing. Baskets were made in the same way and from similar material. In these were formed at least a few of the clay vessels, fragments of which are so plentifully found.

There is perhaps no single article of aboriginal manufacture with which the popular imagination so intimately associates the Indian, as the birch-bark

* "The forts of the Iroquois were stronger and more elaborate than those of the Hurons; and to this day, large districts in New York are marked with frequent remains of their ditches and embankments." Parkman, *Jesuits in North America*, Intro. p. xxix.

canoe, and the Hurons were adepts in the art of building this frail type of vessel. The capacity and strength of these boats when compared with their lightness, were wonderful. One man could with ease carry across a portage, a canoe large enough to hold five or six persons. Scattered remnants of these people continue to make birch-bark canoes, as is also the case with many Algonkin tribes who have lost the art of producing almost everything else that was characteristic of the stone age in America.

As might be expected, the Tionnontates displayed much ingenuity in the making of pipes. Those of clay were by far the more numerous, but many fine specimens have been found carved from stone. In size the bowls vary from that of a small thimble and of far less capacity, to upwards of three inches in length. In clay pipes the hole is often so small, that a modern smoker would require to fill one several times before getting a satisfactory smoke—in stone pipes the capacity is usually much greater. In form there is considerable variety, one of the most common patterns being the flared or trumpet-mouthed head; a second has the margin compressed, forming a heavy collar round the upper third of the bowl; another kind has a square mouth, and occasionally a specimen is found upon which the human face or whole form is represented.

It seems probable that pipes as well as tobacco were produced for commercial purposes. The pipes found in the country inhabited by the Attiwandarons along Lake Erie, are undistinguishable in any way from those that are so comparatively abundant in the district occupied by the Hurons. This is particularly noticeable in the square-mouthed pipes, which are of the least common type any where, and in the manufacture of which there appears to have been almost perfect adherence to a regulation pattern. Of course it is easy to suppose that peoples even so widely separated might conform in their tastes, as to designs, patterns and forms, but when it is taken into account that the Attiwandarons or Neuters had easy access to an unlimited supply of material for spear and arrow-tips, and that all the "flints" found in the Huron country appear to have come from this source, we may reasonably conclude that a system of exchange existed in these articles, and this supposition is strengthened, when it is known that extensive beds of flakings are found along the Erie shore, where the chert-bearing rock is most abundant.

Of the Tobacco Nation as distinguished from the Hurons proper, there is not a vestige left in Canada to-day. The last of the confederacy had to give way before the Iroquois, about 1652-3, when they were compelled to flee to Michilimackinac. Thence they were driven by their old foe to the islands in Green Bay, Michigan, and again from this place to the country of the Illinois. Removing westwards they reached the Mississippi, but the Sioux drove them away. They next found a resting place on Shagamigon Point, on Lake Superior, but this spot they had to abandon, and they returned to Michilimackinac about 1670-1. Their next move was southward to the neighborhood of Detroit and Sandusky, where they were known as Ouendots or Wyandots. Latterly they were removed to a western reserve, and it is now improbable that anything more than the name of Wyandot exists.

Thus has totally disappeared the Tionnontates or Tobacco Nation, a people who, although conforming in many respects to what we characterize as savage, were yet remarkable for their skill in the practice of much that is inseparable from civilization. Their relics scattered so profusely among the Blue Mountains attest the mechanical ability possessed by them, and the French missionaries leave us in no doubt respecting their agricultural and commercial tendencies. While we may not feel warranted in expressing a belief that by any inherent potentiality they would, if left unmolested, have ever reached a much higher

plane than that in which they were found by Brébeuf, yet it appears evident that but for the implacable enmity of the Iroquois they would, under European influences, eventually have ranked among the most progressive of American aborigines in the arts of civilized life.

In the townships adjacent to Nottawasaga, and indeed throughout the whole of the district occupied by the Huron nation, there is yet much to be recorded and considerable material to be collected. Meanwhile it is gratifying to be able to state that our cases now contain a moderately good representation of all that is procurable to illustrate the social condition of a nation which enacted so important a part in the history of Canada, whose hunting and war parties no doubt frequently trod the woods where Toronto now stands, and which, as Parkman says, was "once prosperous, and in its own eyes and those of its neighbors', powerful and great."

VILLAGE SITE AT CLEARVILLE.

On receipt of information from Mr. Thomas Boon, of Bothwell, I visited Clearville in company with that gentleman on May 31. Clearville, once a place of some importance, is a little more than a mile from lake Erie, and is situated near the south-east corner of the township of Orford, in the county of Kent.*

What is known as the "Fort" lies about a mile due north of the village on the property of Messrs. Ridley and Bury. Clear Creek, passes through the farm, and at this point in its flow southwards makes a considerable detour round a low terraced table land, the slopes showing evidence of former higher levels in what must have been a much larger stream. The Indians had taken advantage of the situation for domiciliary and strategic purposes, for both of which it was well adapted. The sandy loam was fitted for the cultivation of corn, the creek supplied fish in abundance, walnut and chestnut trees were plentiful in the neighborhood, and, no doubt, game was easily procured. Here were all the requisites for aboriginal happiness if only protection could be assured against attack from enemies. To effect this the natural bluffs rising from ten to thirty or forty feet above the bed of the creek were utilized. A reference to the diagram will show how this was accomplished. There appear to have been two village sites occupying different levels, but it is not easy to say whether both have been used at the same or different times, or by the same people. The western embankment of the high level site consists chiefly of ashes, and it is probable the face of the natural bluff was made to serve as a place of deposit from the camp-fires. At any rate the materials are those of a kitchen-midden—shells, bones, skulls, broken pipes and pottery, and an immense quantity of ashes. At a point a few yards south of the walnut stump the ashes formed an almost solid bed to the depth of five feet from the surface. Four feet seven inches down we found several large fragments of what must have been very capacious clay vessels. These were proportionately thick and very coarse-grained, free from any ornamentation, and quite unlike many smaller and more delicately made pieces found higher in the deposit. The fragments of flint also appeared to indicate a different source of supply, as those near the top were of a uniform grey color, while the flakes found at the greater depth were of a lighter hue and streaked with narrow dark bands. From three to four feet from the surface were taken three skulls of the common deer, a human jawbone, and pieces of pottery.

*Mr. Archibald Blue, Deputy Minister of Agriculture, had previously directed my attention to this locality.

Beyond taking measurements and sketching a ground-plan nothing further was done at Clearville on this occasion, as permission was required to make thorough examination of the ground.

Having received this from Messrs. Ridley and Bury, I returned on July 16th, again accompanied by Mr. Thomas Boon, who had previously, at my request, engaged men to dig. A drive of fifteen miles from Bothwell occupied some of the first day, and openings made in a number of places brought to light large quantities of coarse pottery fragments, some bone awls or needles, and several stones, one or more surface on each of which showed that they had been employed for rubbing, smoothing, or polishing other bodies. Subsequent operations lasting two days, yielded in addition to these a very fine clay pipe head of unique pattern, a small and rudely formed old pipe, the upper half of a clay pipe in appearance like



On the second day we turned up a skull on the face of the western embankment (marked C) at a depth of three feet. Decay had proceeded too far to make it worth taking away. The day following Mr. Boon laid bare two skeletons near the edge of the northern bluff overlooking the creek (at D). These also were too far gone for preservation. Other portions of human remains were found in various places. A few small and rudely formed slate chisels, two semicircular flint "scrapers," a number of implements made from deer-horn, some unio shells, most of which were worn on the edge, as they had been used in scraping bones, were also found here.

Human remains, much decayed, were found also at A. Here there were two skeletons lying in a north and south direction, not deeper than one foot from the surface.

Mr. Blue and Dr. Bryce afterwards discovered another grave near F, but the bones were too far gone for preservation.

On the third day my sounding rod struck a "soft place," (B) which, on examination, turned out to be a grave containing the skulls and limb bones of eight persons. No ribs or other small bones were found, so that this was evidently a case of second burial. The leg and arm bones had been first thrown into the hole, and above these were placed the skulls in a cluster, without any arrangement, some lying face down, and others on one side. Five under-jaws were found. The distance from the surface of the ground to the uppermost skull was barely two feet.

When compared with those we had previously unearthed the remains in this pit were quite fresh, although some of the femora were more decayed than others, looking as if they had been underground a longer time. All these skulls were secured and are now in the museum, as are also specimens of the femora and tibiae.

The examination of this ground was peculiarly interesting from the fact that not a vestige of European presence or influence was met with over the whole area, and numerous evidences led to the conclusion that the place must have been occupied at widely separated periods by at least two, and perhaps by three different tribes.

The earthworks, I take it, were the work of those who first perceived the advantages of the situation. At one point on the embankment near the creek (E) traces of posts or palisades were discovered, and it is probable that the whole of the lower plateau, as well as the higher one, was thus enclosed. The broken pottery found near the base of the middle embankment (C) were large and coarse and without ornament, and the flint-flakes were different in color and appearance from those nearer the surface. The houses of these people would occupy the enclosed spaces, and in accordance with this we find beds of ashes at depths varying from two to four feet, and alternating with thin layers of sand all over the area in question. A bed of ashes four feet from the surface was found below the eight skulls and other bones already mentioned. The deepest of these were probably left by those who threw up the earthwork, and this view is confirmed from the correspondence in appearance between the potsherds and flint-flakes found at the greatest depths here, with those found deep in the embankment.

By the time the second people took possession it is likely that every trace of former occupation had disappeared, and the new arrivals erected their tents or wigwams close to the middle bank on the higher, or easterly side, finding the western slope convenient as a dumping-ground for refuse. Along the central portion of the bank, north and south of the walnut stump, ashes and earth are intermingled with splintered bones, tips of deer-horn, broken shells, skulls of deer, beavers' teeth and even human remains. Unless we attribute the presence of the last mentioned to accident we shall have to accept it as evidence of cannibalism, for many of the smaller bones are split, while others are wholly or partly charred. The broken pottery found in the midden is finer than what comes from a greater depth and is relieved with simple patterns, although greatly inferior to what we see from many other places.

With few exceptions all the flint and bone specimens we found would be regarded in Europe as belonging to the palæolithic age. Even the slate chisels have scarcely more rubbing done to them than was required to produce a cutting edge.

The grave in which the eight skulls were found, I regard as being comparatively recent, and the work of a third people. Aside from the freshness of the remains in this ossuary, it is not reasonable to believe that those who fortified the place would bury within the enclosure. In addition to this the existence of ashes below the bones goes to show a more ancient possession of the spot by others. A single unio valve, worn on the edge as if it had been used as a scraper was the only thing in the grave besides the bones, and, judging from its position, its presence was probably accidental.

Although the Clearville site did not yield much of what goes to make a museum attractive, it is, nevertheless, one of the most interesting localities I know of in Ontario, on account of its situation, its three-fold (?) occupation, and its perfect freedom from even the slightest trace of the white man. Amateur collectors have at various times made openings and procured relics, and it may be that they have met evidence calculated to upset the non-European view, but I can hardly think it possible that if ever white intercourse had taken place, some proof would not have come to light in the course of our making so many openings.

The diagram of the Clearville village site is not to be regarded as having any pretensions to accuracy, although the relative proportions are correct. The measurements of the spaces enclosed by the embankments are from outside to outside, as nearly as could be ascertained. The height of the bluffs is given approximately.

Mr. Henry Watson, township clerk of Orford, and Mr. Ridley of Clearville gave material assistance to us.

TOWNSHIP OF HUMBERSTONE.

On the 12th of August Mr. Jas. Bain and myself constituted a self-appointed delegation of the Institute, and accepted an invitation from Mr. Peter McIntyre, captain of a Memphis (Tenn.) camping club near Port Colborne, to examine a quantity of Indian relics that had been discovered when digging a hole to plant a flag-pole.

I had previously written to Mr. McIntyre hoping to secure the specimens for preservation in our collection. His reply indicated uncertainty as to the ultimate disposal of the find, but expressed a wish that representatives of the Institute should, meanwhile, see what had been unearthed. We were received with genuine southern hospitality by the members, numbering about eighty, of the "Solid Comfort Club," and had the pleasure of examining several skulls, a few clay pcts, some clay pipes, wampum, stone tomahawks, and a considerable quantity of material of European manufacture including glass beads, iron and copper bracelets, and iron hatchets. While rejoicing heartily with our American friends over the happy discovery they had made, our pleasure was not unmingled with a few degrees of envy, especially when we contemplated the possibility of these objects being taken away from the province, although we have reason to hope that some, or all, of them will yet find a suitable depository with us.

As illustrative of the value set upon articles of an archaeological nature by Americans, it may be stated that almost immediately after the discovery was

made at "Solid Comfort" camp, a highly influential deputation consisting of "honorable" municipal officials, and medical gentlemen arrived from a neighboring city in the United States to secure if possible, the "find" for their museum.

We did not return, however, from this locality empty-handed, for by a previous arrangement we met our old friend Mr. Cyrenius Bearss who has always taken a warm interest in our project, and has made himself correspondingly active in supplying information and procuring specimens. Through his instrumentality we succeeded in adding several valuable stone and other relics to our collection. These include, a very fine gouge from Mr. Gustav Utz; a tube and two cutting implements from Mr. William Michener; a bird-formed amulet (?) from Mr. George Muma; a large shell and some wampum from Mrs. Barney, senior, and two clay pipes from Mr. Isaac Bearss, Mr. C. Fearss himself presented us with a number of valuable specimens all of which are now in our cases.

TOWNSHIPS OF YORK AND VAUGHAN.

On the 5th of September, in company with Drs. Orr and Noble of Maple, Wilson of Richmond Hill, Orr of Toronto, Watson of Sherwood, the Rev. Mr. Rutledge of Richmond Hill, and Messrs. Smelser of Vaughan. I visited a village-site on a farm in the township of York. Mr. Miller the tenant was engaged in ploughing a field which had formed part of the aboriginal village ground, and a large quantity of broken pottery was picked up by the members of our party, who were well supplied with spades, and who managed to dig to a depth of two or three feet over a considerable area in the most promising places.

Many of the fragments were those of large vessels—from ten to twelve inches in circumference, and proportionately deep. A few days before this Dr. R. Orr was fortunate enough to find at this place enough fragments of an unusually large vessel, to complete the rim, and show the form of the body. Its dimensions are, externally: diameter at lip, 14 inches; greatest diameter at swell of body, 17 inches; depth, 17 inches. The upper edge of the lip is formed by four arcs making depressions about half-an-inch below the level of the points of their junction which are not equi-distant. The edge is relieved with a series of diagonal markings, and a border two inches wide consisting of upright and oblique linings surrounds the margin. Considering the enormous size of this vessel its form is not devoid of gracefulness, and the material is thinner than might be expected. Two holes about an inch apart have been bored on each of two opposite sides not far from the top. At first sight these suggest a means of suspension, but the existence of other holes lower down is puzzling, unless, indeed, we suppose that they were made for the purpose of binding fractures by means of thongs, as, in most cases, the hole is close to a broken edge. Had the crack appeared subsequent to the boring, it would most probably have passed through the hole.

Some of the pieces obtained by us were of pots nearly as large, and ornamented with a similar pattern. A very unusual kind of lip was found here. Portions of the margins have been bent inward making the outside convex, and forming a sharp angle on the inside.

The markings on all the fragments picked up at this place are good, and many of them are of unusual designs. A small and plain clay cup was turned up. Although not perfect, it is sufficiently so to show what it looked like when new. It is three inches in diameter across the mouth, and one inch and a half deep, the slope of the sides making the bottom only about two inches in diameter.

Flint-flakes appeared, but only one finished arrow-tip was found. This was procured from Mr. Miller who turned it up with the plow.

A few bone awls, more or less perfect, a number of tarsal bones of the deer and some portions of human skulls were found among the ashes.

From the same farm we procured through the kindness of Mr. James Lawson earlier in the season, a very fine mill or mortar. It weighs upwards of two hundred weight, and has four hollows worn deeply by grinding.

Although, so far, no ossuary has been discovered near this village site, it is certain that one exists not far away—probably in the woods close by, but a search made by us failed to locate the spot.

For many years an ossuary has been known on lot 12, con. 3, Vaughan, and once or twice superficial openings had been made in it. After leaving the village site we determined to examine this place thoroughly, with the consent of Mr. Keffer the proprietor which was kindly given. Mr. Keffer also did everything he could to facilitate the work while it was in progress.

We uncovered a portion of the surface, and reached the bones at a depth of three feet, but the presence of water compelled a stoppage for the day. As it was evident that our amateur digging would not enable us to master the difficulties, Dr. R. Orr kindly undertook to procure two professional spademen for the following day, when with the aid of a pump we were able to examine the contents thoroughly, as well as to ascertain the extent of the pit.

This ossuary presented a number of peculiar features which it may be well to note. Usually these communal graves occupy the highest knoll within easy reach of the village, and light, sandy soil was considered preferable, but in this case the ossuary is not on the most elevated point, and the soil consists of an exceedingly tenacious clay. Overlying the bones was a coating of light-colored "hard-pan" about three inches in thickness. This clay had evidently been employed to cover the bones uniformly, and probably the sides of the pit had been plastered with it also, thus accounting for the quantity of water we found it necessary to pump out.

Then, again there is considerable diversity in the type of skulls in this ossuary. Not only are there the long and short varieties, but many of them have an abnormally large occipital development.

As in other ossuaries, there did not appear to be any special arrangement of bones, except that here and there the skulls were placed in groups of half-a-dozen or more, but lying base up, crown up, or side up. Not a vestige of anything artificial was met with. The diameter of the pit was fully twelve feet and Dr. R. Orr estimated the interments at not fewer than one thousand. We procured for our collection from this place (including a few presented by Dr. Orr) upwards of fifty skulls all more or less perfect. Should time and opportunity permit it is intended to give in next report the measurement of these, and of the other crania in the Museum.

NOTES.

BY DAVID BOYLE.

POTTERY.

In no department of "Primitive Industry" (to borrow the title of Dr. Abbott's interesting book) does our museum continue to afford so scanty a representation as in perfect specimens of aboriginal plastic art. We have accumulated a considerable quantity of fragments bearing a variety of patterns, but nothing like a whole vessel has been added to our collection since last report. The nearest approach was the small cup picked up by Dr. Orr, in York Tp., on the occasion referred to on a former page. This specimen, Fig. 1, is exceedingly plain. There is not the



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

remotest attempt at ornamentation. Many of the sherds, however, found on the same site are lined and dotted in various ways. Other good specimens were procured from the farm of Mr. Thos. White, Nottawasaga, and from the Ridley and Bury property, Orford Township.

Sometimes a certain pattern of ornamentation is found more frequently in a given locality than any other pattern. On the Murray farm, York Township, already mentioned, amid a variety of designs, that shown at Fig. 2 was the most common. A heavy band formed the upper portion of the vessel. This was scalloped or crenated on the lower edge. Near the upper and under edges of the collar parallel lines were drawn all round, and between these the pattern consisted of upright and diagonal lines.

Early in the season Mr. John McPherson, of this city, brought from his summer residence on Mindemoya Island, in a lake of the same name in the

Island of Manitoulin, a number of fragments that were remarkable for the fine quality of the material and the character of the ornamentation. These, when put



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

together, revealed the shape and proportions of a vessel so handsome in form and so unique in design, that I have dignified it with the name of the Mindemoya Vase.

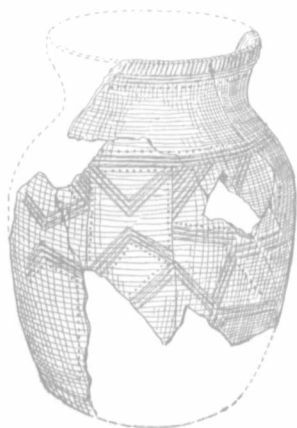


FIG. 3. Mindemoya Vase.

The surface has first been divided into sections by means of straight lines drawn from the upper part of the body to the base. Between these lines the

design consists of triangular and lozenge-shaped figures chiefly bounded by three parallel lines. It is to be observed that these have not been made by any tool that would produce the desired effect at one draw, for, although in the main approximately equidistant, there is not the exactitude that would result from fixed teeth or projections having been employed. Each line has been drawn singly with considerable care and patience, just as have the two series that surround the neck, above and below.

Its measurement when perfect would be 5 in. dia. at the mouth, 7 in. at the widest part of the body, and about 9 in. in height.

The gracefulness of outline displayed in the Mindemoya Vase must appeal to the artistic conception of beauty. In this respect it is equal to the best specimens found anywhere else on this continent, and will compare, not unfavorably with the ancient vessels that have been unearthed in Europe and Asia Minor.

The grain of the fracture, though coarse, is still much finer than is ordinarily the case with Indian pottery, and the material thinner, harder, and more uniform in thickness than is usual. The surface is very smooth, and almost as true and as free from traces of manipulation as if it had been made on a wheel.

It is to be regretted that Mr. McPherson did not succeed in getting all the fragments of this peculiarly interesting vessel, but owing to the situation of the find, beneath the roots of a stump, there is still a probability that further careful search may bring the remainder of the pieces to light.

CLAY PIPES.



FIG. 4. ($\frac{2}{3}$ Size.)

This quaint-looking pipe-head is from the township of Humberstone, where it was found by that intelligent collector and friend of the Institute, Cyrenius Bearss. In spirit and execution it is totally unlike any other specimen in our cases. The cheeks are broadened until they merge imperceptibly into large ears, the edges of which are united by means of four lines across the back of the head. The eyes are made by small depressions round which the clay forms an elevated ring or collar. The mouth is simply a small round hole somewhat larger than those of the eyes. The representation of lips has been neglected. The nose is prominent but damaged at the point. The eyebrows are sharply brought out. The outside diameter at the mouth of the bowl is one inch, and the total length of the specimen is one inch and a quarter.



FIG. 5. (Full Size.)

The finest specimen of handiwork found on the Clearville site last summer is here figured. Enough of the neck remains to indicate that the face looked towards the smoker. Unfortunately the nose is broken, and only the outline of its extent on the face remains. Unlike Fig. 4, the eyes are simply holes, and pains have been taken to form lips. The eye-brows and cheeks are well modelled. The projections for ears are crude, and each is penetrated by a small hole. The band forming the head-dress is peculiar.



FIG. 6. (Nearly full size.)

In common with the greater number of our best clay pipes, that represented in Fig. 6 is from the Township of Nottawasaga. From the curve to the

lips of the bowl this specimen is unusually long. The marking, too, is unlike the prevailing style. Two plain lines surround the upper portion of the bowl, and between these there are four pairs of upright lines, two of which (one each of two pairs) are shown in the engraving. The specimen is of a bright ochre tint, and does not appear even to have been in use. As is the case with a good many specimens that are found where they were made, it was probably broken in the process of burning. It was presented by Master David Melville.

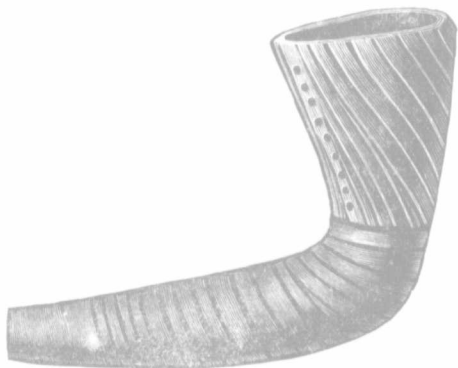


FIG. 7. (Nearly Full Size.)

In form and ornamentation this pipe is unlike any other in the museum. The bowl is capacious and the sides are thin. The lines and dots are quite different in order and arrangement from the normal patterns. It was found on an old village site near a branch of the Don on Braside farm, Richmond Hill, and presented by Mr. David Boyle, sr.

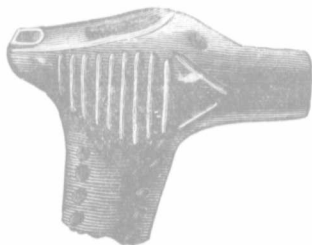


FIG. 8. ($\frac{2}{3}$ Size.)

This pipe bowl is from the Lougheed farm, Nottawasaga. The engraving does not bring out all the details. The bowl hole should be shown as circular, and a deep cut marks the mouth almost meeting the two oblique lines beneath the eye. The nose should also be longer. As an imitation of some animal form, it is per-

haps meant for a fox. The break is too near the head to enable one to say how the stem turned, but it was probably in the direction of the face.



FIG. 9. ($\frac{2}{3}$ Size).

The style of rude art shown in Fig. 9 is totally distinct from anything else in the museum. It is indescribable, and is not well brought out in the cut. When perfect the face must have looked down upon the stem at an angle of 30° . The face consists mainly of three cavities, containing mouth and eyes, which are deeply impressed at the bases. Viewed from underneath it has a laughing appearance. From the farm of Mr. Thos. White, Nottawasaga. Mr. Edward Coyle.



FIG. 10. ($\frac{2}{3}$ Size.)

This pattern of pipe is unique, so far as I know. Although the hole is almost circular, the outline of the exterior at the mouth is oval, measuring from front to back $1\frac{1}{4}$ in. and from side to side $1\frac{1}{2}$ in. One side is shown in the cut. An inch and a quarter from the lip the shorter diameter is still further compressed to $\frac{5}{8}$ in., the measurement from side to side remaining the same. Longitudinally the head is divided by upright lines into four equal parts—one

of them is shown above. These are connected by diagonals. Nottawasaga Tp. David Melville.

It is somewhat singular that although no other clay pipe of a similar shape had ever found its way into our collection, the finder of the specimen shown at Fig. 10 was fortunate enough to find the stem of what was evidently another pipe made after the same pattern. It was intended to give a figure showing the resemblance between the head figured and the stem here referred to, but as the engraving was not ready its presentation must be deferred. In the case of the stem the ornamentation has been, however, somewhat more elaborate than on the pipe head, for the lines are more numerous and more carefully made, and a series of dots on the lower side relieves the pattern. The toothed edges are neatly moulded.

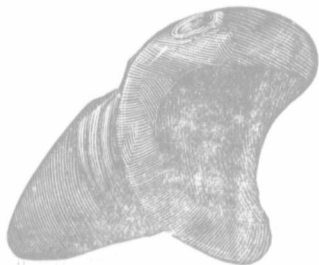


FIG. 11. (Full Size).

Although the original of Fig. 11 is imperfect, the cut does not do it justice. It is meant no doubt to represent the head of a snake, and is, in this respect somewhat like No. 90 in Case S. The jaws, however, are reversed in this specimen. Fig. 11 was found in the Nottawasaga, and was presented by Mr. Angus Buie.

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STONE PIPES.



FIG. 12. (Nearly Full Size.)

Fig. 12 represents what is the heaviest if not the most elegant pipe in the collection. The material is a light grey, veined marble. Originally, no doubt, smooth, it is now very rough on the surface, looking as if it had been long exposed to the action of the weather. Notwithstanding the size of the specimen the bowl is remarkably small, as the hole (whose greatest diameter is only $\frac{3}{4}$ in. and narrows rapidly) is less than an inch and a quarter in depth. The wall of the bowl is from $\frac{3}{8}$ in. to $\frac{1}{2}$ in. in thickness. In cross section this pipe is somewhat oval, the longer diameter being at right angles to the stem hole.

It was found on Bræside Farm, near Richmond Hill, by Alexander and Arthur Boyle, children of the proprietor.



FIG. 13. (Nearly Full Size.)

The smallest stone pipe in the museum is illustrated at Fig. 13. It is well made and resembles in shape some that we have much larger. The stem-hole

enters the lower triangular portion. This diminutive specimen is from the Qu'Appelle River Valley, N. W. T., and was presented by Mr. Jas. C. Stokes, Reeve of King Tp.



FIG. 14. ($\frac{2}{3}$ Size).

Fig. 14 is a somewhat rude attempt to imitate the human face, on a stone pipe bowl. The marks of the workman's tools are still apparent in this specimen. A first attempt to bore a hole at the base has proved a failure, and a second beginning has been made immediately above on the side shown in the cut. The stem hole enters below the middle on the opposite side. The bowl is thin, and is brought to a sharp edge at the lip. Hubert Conner, Nottawasaga.



FIG. 15. (Full size.)

Fig. 15 illustrates an unusual attempt at variation in the form of stone pipe-heads. Apparently the design of the workman has not been completed, for the projecting portion on the upper half is a rough and unfinished representation of a human face. The stem hole enters from the opposite side. This specimen was

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procured from Mr. Ed. Coyle, Sunnidale, but it was picked up from the village site on the farm of Mr. Thomas White, Nottawasaga.

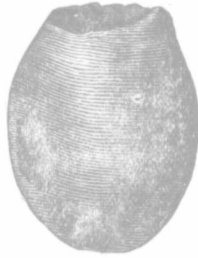


FIG. 16. ($\frac{1}{3}$ Size.)

Fig. 16 must have been when perfect a beautiful piece of aboriginal handi-craft. It is made of serpentine, and contains large crystals of iron pyrites which have been carefully rubbed down uniformly with the body of the material. Fig. 16 is given here chiefly on account of its having two stem-holes. This pipe was found on the farm of Mr. Duff, Nottawasaga, and was by him presented to the museum.

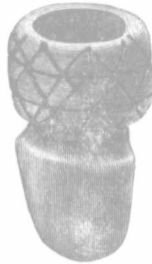


FIG. 17. (Full Size.)

This very handsome stone pipe was presented by Wardie and Ottie White. It was found at Lambton Mills, York Tp. It is nearly perfect in every respect. The material is a fine, light brown sandstone. The stem-hole is bored immediately below the central groove, on the right hand side of the engraving.

from the village



FIG. 18. ($\frac{1}{4}$ Size.)

Specimens of the "white stone" pipe are rare in Ontario. Fig. 18 illustrates one of two in the museum. It is $5\frac{1}{2}$ in. long, considerably weathered, and has what appears to be the head of a bear or dog on the inner edge of the bowl. This pipe was found on the Lotteridge farm, near Hamilton, a spot from which large numbers of valuable relics have been procured.

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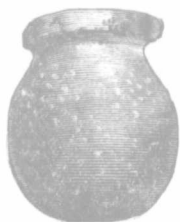


FIG. 19. (Full Size).

To Mr. Dugald Currie, teacher, Creemore, we owe the pipe here figured. It is very well made, the chief defect in its form being in the flared tip, where, no doubt owing to a want in the material on one side the prominence is less than elsewhere. Two parallel lines (not shown) surround the bowl, which in cross sections is rather oval than circular. A hole for suspension has been bored through the bottom, below the stem hole on the left side of the illustration. The material of this pipe is steatite

BONE AND HORN.

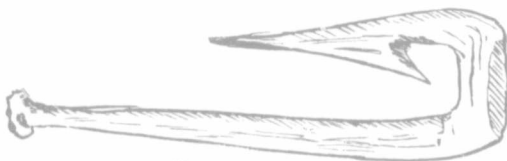


FIG. 20. (Full Size.)

Fig. 20 is a somewhat rare form of relic in anything like a perfect condition, and even fragments are not common. This specimen formed part of the collection presented to the museum by Mr. James Dickson, of Fenelon Falls, and was found in the county of Victoria. The form is extremely suggestive of Eskimo

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influence or contact, and some force is added to this conjecture from the fact that we have a small walrus tusk found in the same locality.

This specimen, in any event, must be classed among those of comparatively recent date.

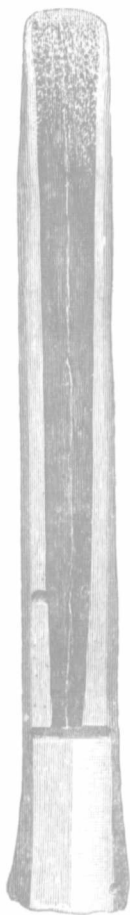


FIG. 21.

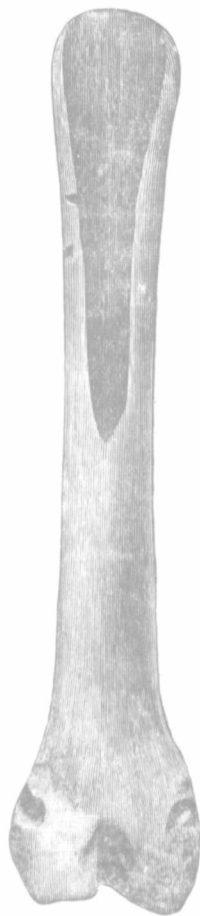


FIG. 22.

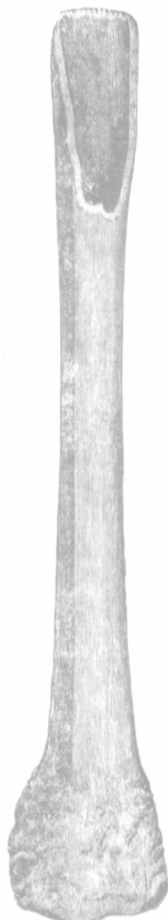


FIG. 23.

The specimen here figured (21) is an exceedingly handsome one, and measures $11\frac{3}{4}$ inches in length. The bone of which it is formed is almost square in cross section, and the workmanship is so well done as almost to lead one to the conclusion that steel tools must have been used in reducing the material to its present shape. The side shown in the engraving has been neatly shouldered down near the head

where the bone is an inch and a quarter thick, and has been made to taper until a good cutting edge is formed at the opposite end.

This tool was found on the farm of Mr. Thomas White, Nottawasaga.

Within a few miles of the same place another similar implement was found on the farm of Mr. Melville, by whose son it was presented to the museum. It is shown at Fig. 22. In this case the workmanship is not so good, although the specimen is equally interesting. The bone, in cross section, is oval, and no pains have been taken to modify the knuckle or joint processes that form the head. No attempt has been made to form a shoulder as in Fig. 21, as the upper side shown has been ground in a uniform line to produce an edge at the mouth. It is somewhat shorter than Fig. 21, measuring only $11\frac{1}{4}$ in.

Some light was thrown on the probable use of these implements, by Messrs. Ah-yan-dwa-wa and Mah-shuck-a-wa-we-tong, two Indians from St. Francis' Reserve, Manitoba, who visited the museum during the fall. They stated that similar tools are still in use among the tribes in the North-west for the purpose of skinning or of dressing skins, and these gentlemen promised to send us specimens of those that are thus employed.

Since that we have been presented by Major J. M. Delamere of this city, with one of the North-west specimens, which is represented at Fig. 23. Like Fig. 21 its cross section has been ground square, and like Fig. 22 the original joint formation at the head is left intact—indeed a good deal of cartilage is still adherent to that end. It differs, however, from both of these at the mouth, where a number of shallow notches have been worked on both sides lengthwise giving the cutting edge a serrated appearance. For scraping purposes this device would prove serviceable. Major Delamere's specimen was procured from near Battleford. It is $14\frac{1}{4}$ in. long, and at the thickest part of the squared portion measures $1\frac{1}{4}$ in. The taper extends only $4\frac{3}{4}$ in. from the lip.

Among a number of articles recently presented by William and David Melville is a small tool, somewhat imperfect, of the same type as these.



FIG. 24. ($\frac{2}{3}$ Size.)

Fig. 24 represents a forked deer-horn prong, the marks upon which tell their own tale. The abraded hollow as seen in the cut on one branch has a corresponding

3 (C.L.)

ponding depression on the opposite side of the other. It seems evident, therefore to have been held in the hand by the squarely cut end, and to have been used for rounding or smoothing thongs and sinews in a state of tension as the material passed over one part and under the other while the tool was moved briskly backwards and forwards. It is from Humberstone Tp., and was presented by Mr. Cyrenius Bearss.

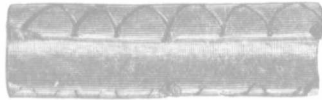


FIG. 25.

Fig. 25 is a piece of bone $2\frac{3}{4}$ in. long, and $\frac{7}{8}$ in. at its greatest diameter. A deep hollow runs along the side shown in the engraving. From edge to edge of this hollow, round the opposite side fourteen lines are deeply cut diagonally, the seven from the one side crossing those from the other and forming a lozenge pattern. The bone is cut smoothly and squarely off at both ends and has a semi-lunar hole through it. Lambton Mills. Wardie and Ottie White, Toronto,

FIG. 26. ($\frac{2}{3}$ size.)

A few bones similar to Fig. 26 are labelled in our cases as "Tally" or "Record" bones. The fact that these are notched slightly, crosswise, in one or more rows, naturally suggests keeping count of something; scalps, captives, number of men in a band, days travel, etc. Having counted the notches on all the specimens of this kind (about half a dozen) in our possession, it was interesting to note that none exceeded twenty-nine or thirty, that one had two rows of fourteens, and that another was arranged in sevens, the total amounting to twenty-eight.

In Fig. 26 there are two rows of notches, twenty-eight in each row. These are delicately cut along the crowns of the two ridges that extend from the cylindrical body of the bone to the joint. As reckoning time wholly by "moons" was common to the Indians with the uncivilized of all countries, the maximum of marks on these bones might lead one to regard such specimens as simple calendars, or, perhaps, rather as mnemonic aids relating to days past. On the latter supposition, we should not, of course, expect to find the groups of markings exceed twenty-eight or twenty-nine, and any less number could be easily accounted for.

With so small a number of specimens to compare, it would be rash to write with assurance on this point, but it is to be desired that those who have "Tally" bones will examine them carefully, and inform us of the result. It is needless to say that we will be glad to receive specimens that tend either to confirm or to disprove the view suggested.

Fig. 26 is a very fine specimen, squarely cut at one end, and exceedingly smooth. Near the ridged and marked end it is stained green owing to contact with copper. I found it along with some native copper beads in Tremont Park, Tidd's Island.

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FLINT.

FIG. 27. ($\frac{1}{2}$ Size.)

The specimen figured here is of an unusual type. Our collection of "flints" is large, but this is the only one of its kind we have. It is from the Miami Valley, Indiana, and formed part of the collection of Mr. C. J. B. Ratjen, of Lawrenceburg.

STONE TUBES.

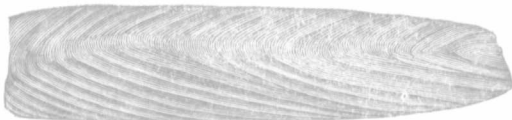


FIG. 28.

Our collection of these mysterious objects has received some valuable additions since the issue of last report. Two very fine specimens came from Wolfe Island, the largest of which measures $8\frac{1}{2}$ in. in length.

Fig. 28 is $4\frac{1}{4}$ in. long. The hole is not quite round and corresponds in size with the outside measurement of the stone. Lengthwise, on the opposite side from that shown above there is a shallow groove. The material is stripped slate. This specimen was presented by Mr. Wm. Michener, one of the oldest and most highly respected surviving settlers in the Township of Humberstone.

FIG. 29. ($\frac{1}{2}$ Size).

Fig. 29 is of the same material as Fig. 28, and is evidently an unfinished tube. A hole about $\frac{3}{4}$ in. in dia. has been bored to a depth of $1\frac{3}{8}$ in. at the larger end. Found on farm of Mr. W. H. Johnston, Township of West Williams.

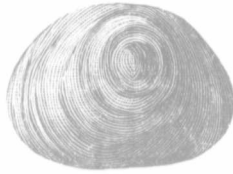


FIG. 30. (Nearly Full Size.)

This really fine specimen appears to be unfinished, as it was likely the intention to bore it perpendicularly. It is of striped slate, well made (better than the engraving) and was found near the village of Burford.



FIG. 31.

The specimen represented here is one of the puzzles. But for its great size, $5\frac{1}{2}$ in. long and 4 in. wide, it might be taken for an intended pipe-head of the

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McCallum type found near Milton, figured in our report for 1886-7. The material is a close grained, dingy blue argillite, and is $1\frac{1}{8}$ in. thick. The hole in the middle is counter-sunk on both sides, and some pecking has been done on each side both above and below this hole, either with the intention of enlarging it, or of producing others. Whatever the ultimate intention may have been, the work is evidently incomplete, but is none the less interesting on that account.

This, along with some other fine specimens was presented to the museum by Mr. Angus Buie, of Nottawasaga.



FIG. 32. (Full Size).

The curious nondescript specimen here figured is from Nottawasaga. It is made of white marble, and has a strong resemblance to the head of a bull-dog. Owing to mistake on the part of the engraver, there should be a shoulder and short leg shown behind the neck. Originally the specimen was probably full length as the lower end presents a rough surface as if a piece had been broken off. From Mr. John Hannah, teacher, Duntroon.

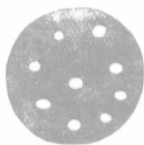


FIG. 33. (Full size.)

Fig. 33 is of brown argillite, less than $\frac{1}{8}$ of an in. in thickness. It seems to have been worn as a pendant; perhaps, as a part of a string of beads. One hole near the margin is larger than the others and shows signs of wear. It is unique so far as our collection is concerned, and not common anywhere. Loughheed farm, Nottawasaga.

MILLS OR MORTARS.

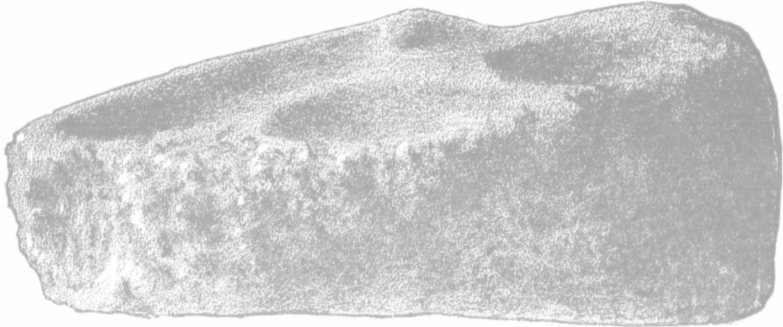


FIG. 34.

Although our collection of mills or mortars is not an extensive one we have been successful in procuring a few very good specimens. The largest and best is from the township of York, within a few miles of Toronto. It is 2 ft. 9 in. long; 1 ft. 7 in. at the widest, and 8 in. thick. The stone is of gneiss, hard, and of a light pink color. At the larger end a hollow has been formed, 16 inches long, 10 in. wide, and $1\frac{1}{2}$ in. deep. Near the middle of the length, but to one side, there is another and almost circular hollow, the greatest diameter of which is $10\frac{1}{2}$ in., and the depth 1 in. At the smaller end of the stone, which rounds off to less than a foot across, there is a third hollow whose longest diameter is 9 in., and the shortest 8 in. The depth of this one is only about $\frac{3}{4}$ in. On the opposite side to the second hollow mentioned, is a fourth hollow, occupying all the remaining available space. It is only half round, being worn out to the margin of the stone, which has here a straight face.

This must have proved an excellent stone for grinding purposes as the gneissoid laminations have broken off sharply in the course of rubbing, thus presenting a series of angular edges along the sloping sides of the hollows that no doubt facilitated very much the bruising process as applied to seeds, nuts or roots. The weight of this specimen cannot be less than two hundred pounds.

In many parts of the world stones have been found indicative of bruising by means of pounding, and some of those met with in this country may have been so used, but all the specimens we have, appear from the character of the hollowed portion to have been subjected to a circular, grinding motion. This was manifestly so with the large stone in question. It is large enough to permit of at least three persons grinding at the same time. The continued use of such a heavy, and consequently unportable stone, points to a considerable permanency of *habitat*, or else frequent return of people at intervals to the same locality.

The upper, or hand stone, was usually a somewhat flattened and rounded piece of primitive rock weighing from three to six pounds. Long and artificially formed pestles are of comparatively rare occurrence in Ontario, and those that have been discovered are, as a rule, exceedingly plain, differing in this respect from many that are found in more southerly districts.

COPPER.



FIG. 35. (½ Size.)



FIG. 36. (Full size.)



FIG. 37. (Full Size.)

The Fig. 35 represents a remarkably fine specimen of native copper implement found on the north bank of the River Kaministiquia, near Fort William, and was presented to the museum by Capt. J. S. Smith, of Fort William,

along with a spike or spear of the same material, about one foot long, from the same locality. The edges forming the handle socket are just turned over enough to give a good grip, and the cutting end has been worked to as keen an edge as it is possible for copper to take.* This is in many respects the best specimen of native copper implement in our cases.

Although our collection of native copper relics is comparatively small, its extent is already much greater than we anticipated making it when we began to form cabinets. Neither is it to be expected that we shall ever possess objects of this material in such profusion as those of stone or bone. It is not quite easy to account for the scarcity of native copper tools. Distance from source of supply is not enough. Indeed, it seems probable that for most purposes the implement of hornstone or chert was in nearly every way more serviceable than that of the virgin metal. However this may be, copper has not, at any rate, entered so largely into aboriginal economy in this part of the country, as has shell of a species that had to be brought from even a greater distance in an opposite direction, and offering fewer facilities for travel.

Fig. 36 is a good example of the spear or lance head. It was found in the valley of the Ottawa, and has with other objects been placed in our keeping by Dr. T. W. Beeman, of Perth.

Another weapon of this material is illustrated here, Fig. 37. It was found near Lakeside and was presented by Mr. Sparham Sheldrake of that village. Like nearly all such objects it has a rough surface as the result of weathering, and this roughness is shown in short and crooked ribs running longitudinally. Had the metal ever been smelted no such effect would have been produced from weathering, because the metal would then be homogeneous throughout; but in its native condition small portions here and there are harder than the rest, and the effect of hammering into shape is to elongate these. In consequence of their greater hardness these parts withstand the action incident to decay better than the other portion and are thus left standing above the general surface. It is mainly on account of such ridges that so many persons, writers and others, have concluded that the implements or weapons were cast in a mould.

*It may be remarked here that the commonly accepted belief with regard to tempering of copper tools by the Indians is a fallacy. If they have any unusual hardness it is merely the result of cold hammering.

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FIG. 38.

This figure represents one of eight skulls taken from within the ancient enclosed village site on the Ridley and Bury farm, Clearville. The measurement of these and other skulls will probably be given in next report; meanwhile the contour of figure 38 is worthy of study. The frontal recession is particularly noticeable.



FIG. 39.

Among the large number of interesting skulls from the Keffer ossuary in Vaughan township, a good many are remarkable for their occipital development, as in Fig. 39.

 MODERN INDIAN DRESS, ETC.

It is perhaps almost as desirable that we should preserve specimens of the present day of aborigines' workmanship as well as those of a bygone time. While it is true that the Indian as we know him has lost the art of producing stone weapons and tools, he (and we should say also she) exists in the manufacture of a few simple articles including chip baskets, snow-shoes, and various objects ornamented with bead-work. In the production of these, the women, especially, show considerable taste, and the exercise of much patience.

Beads were valued highly among them even in their primitive condition when stone, shell and bone were their only available materials, and the introduction of the colored glass article proved so attractive that the ancient wampum was discarded at a very early date even in the making of treaty belts. All the belts of this description now held by Fire-keeper, John Buck, for the Six Nation Indians on the Tuscarora Reserve, are composed of European material, as glass, or of other material shaped by European skill, as shell.

We are indebted to the Rev. John McLean, now of Moosejaw, N.W.T., for a number of modern specimens illustrative not only of the skill, but of the manners and customs of the Blood Indians among whom he spent many years of enthusiastic labor, and regarding whom he has written an extremely interesting volume, besides numerous papers that have been read before the Canadian Institute, and some that have appeared in the publications of the Smithsonian Institution.

A list of the specimens presented by Mr. McLean and others will be found in the catalogue accompanying this report.

 FRENCH RELICS FROM VILLAGE SITES OF THE HURONS.

THE GEOGRAPHICAL DISTRIBUTION OF THESE RELICS IN THE COUNTIES OF SIMCOE, YORK, AND ONTARIO.

By A. F. Hunter, B.A.

The French traders of the seventeenth century brought amongst the Huron Indians of Ontario large quantities of articles of European manufacture in exchange for the Indians' furs. The metal portions of these articles are found in abundance at the present day in those parts of the province inhabited by the Hurons at that time.

The most abundant relic of this kind is the iron tomahawk, thousands of which have been found in various parts of the province, but more especially in North Simcoe, and at the west end of Lake Ontario, where the Neuters dwelt. These tomahawks are of various sizes, but almost all of the same well-known shape, each bearing three crosses in relief on one side; their appearance is, however, too well known to require a description.

Copper and brass kettles are also numerous, and are almost invariably found in the ossuaries. In nine cases out of ten these kettles, which were formed of sheet metal, were rendered useless by blows from a tomahawk upon the bases of the vessels. This practice of rendering useless every article deposited with the dead was, however, common to many tribes, the apparent object being to remove any temptation to desecrate the graves.

Besides tomahawks and kettles, there are iron knives, earthen and glass beads, copper bracelets and ear ornaments, and many other articles. The various kinds of French relics are well represented in the Museum of the Canadian Institute, where they can be minutely examined at any time, so that they do not require further notice here. We shall now proceed to the special subject of this paper—the geographical distribution of these relics over the Hurontario isthmus. The analysis by townships of the Huron village sites and ossuaries in the three counties of Simcoe, York and Ontario, which is given in the table accompanying this paper, shows certain evident facts regarding the geographical distribution of French relics. The information supplied by this table has been obtained from catalogues opened by the writer for each of the counties mentioned, in which details of each village site, ossuary, etc., have been collected and recorded. A majority of the sites were personally visited.

The Huron custom of settling in village communities and remaining for a considerable time, makes it an easy task to recognize the remains of one of their villages. These are indicated by abundant accumulations of charred soil and ashes, broken relics, etc.; complete relics are, unfortunately, becoming rare. In preparing these catalogues, therefore, although many sites were visited, it was almost impossible to obtain any relics. In most cases, accordingly, all that the writer could do was to make notes of what relics had been found in past years from as many reliable sources as possible. It occasionally happened that the very fact of the former existence of a village or ossuary had almost passed from the recollection of the present inhabitants of the district.

Up to the present time the writer has made a record of the following Huron sites:—

Villages	Simcoe	218	York	33	Ontario	14
Ossuaries	"	122	"	5	"	6

[These figures do not include a considerable number of Algonquin village sites and burial grounds, which have also been recorded; they apply altogether to the sites once occupied by Hurons.]

They do not indicate the absolute number of village sites and ossuaries in each county, nor are they any index of the relative numbers of sites which may subsequently be found to exist. They merely indicate the numbers recorded so far in each county according to our opportunities for making enquiries. They are, however, sufficiently representative to enable us to arrive at certain important conclusions respecting the geographical distribution of French relics.

Many persons have contributed valuable facts towards the preparation of the catalogues mentioned, for which the writer is under obligations to them; and it would be a long task to give the names of all those to whom credit is due. It will be sufficient for the present to say that the name of every person who became authority for a statement regarding any site, has been recorded in its descriptive account of the catalogues.

Further investigation may modify to some extent the statistics furnished here; but a degree of confidence may be placed upon the general relations indicated by the table:—

TABLE SHOWING THE GEOGRAPHICAL DISTRIBUTION OF FRENCH RELICS IN THE COUNTIES OF SIMCOE, YORK, AND ONTARIO.

TOWNSHIP.	VILLAGE SITES.			OSSUARIES.		
	In Catalogues.	Post-French.	Percentage.	In Catalogues.	Post-French.	Percentage.
Simcoe County:						
Nottawasaga.....	32	11	35	41	11	27
Tiny.....	27	14	51	19	8	42
Tay.....	16	12	75	18	9	50
Medonte.....	41	33	80	19	14	74
S. Orillia.....	6	4	66	2	1	50
Oro.....	23	8	35	9	5	55
Vespra.....	19	5	27	2	1	50
Flos.....	12	2	16	4	1	25
Innisfil.....	30	5	17	3		
W. Gwillimbury.	5	1	20	2		
Tecumseth.....	7	1	14	3		
York County:						
E. Gwillimbury.	4					
King.....	2					
Whitechurch.....	6			2		
Vaughan.....	3			1		
Markham.....	3			2		
York.....	13	1	8			
Scarboro'.....	2					
Ontario County:						
Scott.....	3			2		
Uxbridge.....	1					
Reach.....	6	1	16	2		
Pickering.....	3			1		
Whitby.....	1			1		
Totals.....	265			133		

The first column of the table gives the townships. In the second is given the number of village sites so far recorded in each township. The third contains the number of village sites at which French relics have been found, and the relative percentage which these bear to the whole number recorded is carried out into the fourth. This is done for the purpose of comparing one township with another. The fifth, sixth, and seventh contain similar statistics relating to the ossuaries.

The townships are arranged in the table, beginning at Georgian Bay and descending southwards. Bearing this fact in mind and glancing down the fourth column, it will be observed how rapidly the percentage of villages where French relics have been found falls off after leaving the first few townships in the remote north beside Georgian Bay. This was the district occupied by the Hurons in the time of the Jesuit missionaries of the seventeenth century. If we draw a line from east to west through Kempenfeldt Bay on Lake Simcoe, it will be seen that of all villages south of this line less than twenty per cent. have yielded French relics. The difference in the geographical distribution of these relics on the two sides of this line is made apparent by contrasting one representative township from each part, say Medonte and Innisfil. In Medonte 41 village sites have been entered in the catalogue, of which no less than 33 (or 80 per cent of them) have yielded French relics; while of 30 village sites in Innisfil, only 5 (or 17 per cent.) have yielded French relics, and merely one or two isolated tomahawks in most of these five cases. There is a wide difference here—viz., between 80 per cent. and 17 per cent., and this difference of geographical distribution can only be accounted for by supposing that the larger part of the villages of Innisfil, as well as of the others south of the line just drawn, were occupied by the Hurons before the arrival of the French traders. In York and Ontario counties there is but one case in each, so far as the writer has ascertained, of European relics having been found at Huron village sites, and in neither of these cases is the evidence very conclusive. Many European relics have been found at Algonquin sites in these two counties, and the two cases in question may be of relics lost by later Mississagas on the ground previously occupied by the Huron lodges.

Independent evidence of a similar character is furnished by the ossuaries. There is no proof of any French relics having been found in the ossuaries south of the line through Kempenfeldt Bay, that is in South Simcoe, York, and Ontario. But in North Simcoe the percentage runs as high as 74.

This classification affords us a means of arriving approximately at the date of Huron occupation of these parts of Central Ontario under consideration. The beginning of French intercourse with the Hurons may be said to have taken place in 1615, when Champlain made his celebrated journey to their country. From that year onwards traffic between the French and Hurons was established. So that speaking in a general way, this date, 1615, is the dividing line between post-French and ante-French villages. Wherever French relics are found, in most cases it may be concluded that the village dates after 1615. The table therefore shows that the sites in N. Simcoe, near Georgian Bay, were mostly post-French, while the more southerly ones—those in S. Simcoe, York and Ontario—were chiefly ante-French.

The former statement might readily have been inferred from our historical data of the first half of the seventeenth century, without the assistance of archaeology; but, little of an historical nature has been known with regard to the numerous Huron sites of S. Simcoe, York and Ontario. It would appear from the table that they chiefly belong to a period preceding the sites of N. Simcoe.

There are references in the early French writers to an increase of population in the Huron tract (now North Simcoe) from which we may infer that what might be called a migration took place. Champlain and Le Caron in 1615 reckoned 17 or 18 villages in the Huron peninsula, with 10,000 persons. Brebeuf, in 1635—20 years later—found 20 villages, and about 30,000 souls. [Relations (Canadian edition), 1635, p. 33; 1636, p. 138.] Here is evidence of a rapid influx from some quarter into the sheltered peninsula of N. Simcoe, between the years 1615 and 1635.

The aborigines of any country are always found at the corner opposite to the point of entry of their invaders. This was the case with the early Celts of Britain, the Lapps of North Europe, the Basques of Southern France, and indeed with every race of conquered people known to history. It might therefore be expected that the Hurons would remove as far as possible from their enemies, the Iroquois; and it was in this position—against the northerly limit of land adapted to agricultural pursuits—that they were found by the early French.

These inferences from historical considerations have been fully confirmed by the table of sites given, from which it is evident that a removal from the sites of Ontario, York and S. Simcoe took place about the time the French first came.

In conclusion, it may be stated that there is another important feature of the N. Simcoe sites, not indicated in the table, and which though highly important, will be merely alluded to in this paper. The largest Huron village sites in the country are found there, and they are likewise post-French. It would appear from this that as danger from the invading Iroquois grew greater, the population became amassed into larger villages for safety.

CATALOGUE OF SPECIMENS

IN THE

PROVINCIAL ARCHÆOLOGICAL MUSEUM.

The following list does not comprise all that is in the cases of the museum. Many pages would be required, merely to mention the names of donors and localities connected with hundreds of stone axes, "flints," and other comparatively common types of relics.

Neither are the arrangement and classification to be regarded as satisfactory or final. Museums, like libraries of humble origin, require frequent changes and re-arrangements corresponding to the increase and variety of the collections. This is especially so when, as with us, the growth is remarkably rapid, and the space at disposal limited. From almost absolutely nothing four years ago, what follows will give some idea of the success that has attended the efforts of the Canadian Institute to form an archæological collection in some degree worthy of the province.

It is hoped that the example set by so many persons whose names appear in this list as those of donors will be emulated by others, who may have in their possession single specimens or small collections, and that these objects may be presented to us for safe keeping.

S. stands for Mr. J. W. Stewart and M. for Mr. W. Matheson, from whom we purchased small collections, and Y. P. col. stands for York Pioneers' collection.

DAVID BOYLE,
Curator.

CASE A.

PARTLY OR WHOLLY OF EUROPEAN MANUFACTURE, BUT FOUND IN FIELDS AND OSSUARIES.

1. Quantity of small red glass beads. Beverly Tp. Jas. Dwyer.
2. Quantity of small blue and purple glass beads. Beverly Tp. Jas. Dwyer.
3. String of glass beads. Baby Farm,* York Tp. Miss Kirkwood.
4. String of very small red glass beads. York Tp. Y. P. col.
5. Four blue glass beads. Humberstone Tp. Cyrenius Bearss.
6. Two blue and one red glass bead (all square in cross section). Brantford. S.
7. String of glass beads, various colors, with stone pendant. Beverly Tp. Dwyer, col.
8. String of long red glass beads. No locality. Y. P. col.
9. String of glass, shell and stone beads. Y. P. col.
10. String of long blue glass beads. York Tp. Y. P. col.
11. Quantity of long and spherical glass beads, red and blue. Beverly Tp. Dwyer col.
12. Thirteen glass beads from $\frac{1}{4}$ in. to $1\frac{1}{2}$ in. long, variegated red and blue. Lake Medad. Y. P. col.
13. Two oval glass beads. Beverly. Dwyer col.
14. Quantity of blue and red glass beads, various sizes and forms. Nottawasaga. G. Loughheed.
15. Three long, pale blue, glass beads (cross section square). Beverly. Dwyer, col.
16. Three red glass beads. Norwich Tp. S.
17. Quantity of small glass beads, various colors. Beverly Tp. Dwyer col.
18. One cylindrical variegated glass bead, 1 in. long and $\frac{1}{2}$ in. diameter. Nottawasaga. Loughheed col.
19. String of red and blue (mainly round) glass beads, with small Catholic medallion. Baby Farm. J. Kirkwood, Toronto.
20. Brass brooch plate. Mindemoya Island, Manitoulin. John McPherson, Toronto.
21. Silver brooch plate. Brant Co. S.
22. Silver medal (temp. George III). The body of the medal is thin but has the bust of the youthful king ob. and royal arms rev. in strong relief. Y. P. col.
23. Brass belt medal, $2\frac{1}{2}$ in. diameter. Beverly Tp. Dwyer col.
24. Iron bracelet. Beverly Tp. Dwyer col.
25. Large brass finger-ring. Baby Farm. Y. P. col.
26. Rude copper medal apparently made from fragment of some copper vessel. Baby Farm. Y. P. col.
27. Small ring-brooch and pin. Baby Farm. Y. P. col.

*Pronounced *Bawby*. The Baby family was intimately associated with the early history of Detroit.

28. Small brass seal finger-ring. On the seal is the letter L enclosing a heart. Baby Farm. Miss Kirkwood.
29. Brass seal finger-ring. On seal are engraved I. H. S., with a cross standing on the bar of the H. This ring was presented in a neat box of porcupine quill work. Ossossané, Simcoe Co., Rev. Father Laboureau. Penetanguishene.
30. Silver ornament—circular, $2\frac{3}{8}$ in. diameter. Consists of a narrow, flat rim, $\frac{1}{8}$ in. across, enclosing a six-pointed star, in the centre of which is a circle $\frac{1}{4}$ in. diameter, outside measurement. The whole of the pattern is of the same dimensions as the rim. The star and inner circle are slightly relieved with double-dotted lining on both sides. No locality. Y. P. col.
31. Copper coil nearly 1 in. in diameter. This seems to have been made of round wire which was beaten flat after being coiled. Baby Farm. Jas. Kirkwood.
32. Brass belt-buckle, oval, $3\frac{1}{2}$ in. long by $2\frac{3}{8}$ in. wide. Found near Toronto, Wm. Townsend.
33. Quantity of glass beads in considerable variety. Parkdale. J. R. Wismer, Parkdale.
34. Two large beads, one blue, one white. Near Toronto. Y. P. col.
35. Rudely formed ear of large copper kettle. It is made of several thicknesses of sheet copper folded. Beverly. Dwyer col.
36. Sheet copper coiled to form a rough tube and bent like L. Baby Farm. J. Kirkwood.
37. Sheet copper, fragment of kettle bottom. Shows hammer marks. Beverly. Dwyer col.
38. Four fragments of sheet copper from kettles. Baby Farm. Miss Kirkwood.
39. Twelve pieces sheet copper. Five of them triangular and perforated near the middle, five are coiled conically. Beverly. Dwyer col.
40. Several fragments of copper kettles. Beverly. Jas. Rae.
41. Two fragments copper kettles. F. A. Benson, Port Hope.
42. Brass vessel 6 in. diameter and $2\frac{3}{4}$ in. deep, with ears. No record.
43. Lead ingot and conical bullet. Baby Farm. J. Kirkwood.
44. Lead smoking pipe. Scotland Village, Brant Co. S.
45. Piece of sheet copper 7 in. long and $2\frac{1}{2}$ at widest. Said to have been over two feet long when found along with other relics. Jas. Dickson, Fenelon Falls.
46. Sheet copper needle (?) $2\frac{7}{8}$ in. long, barely $\frac{1}{4}$ in. wide at head where it is broken apparently about midway through a long eye, $\frac{1}{4}$ in. of which remains. Nottawasaga. Lougheed col.
47. Iron pipe-tomahawk. Pipe head broken off. Blade has floral design engraved on each side. Some lines are also cut on the sides of the eye. Vardy Lake, Addington Co. Dr. T. W. Beeman, Perth.
48. Part of gun-lock. Baby Farm. Miss Kirkwood.
49. Fire or tinder steel. Y. P., col.
50. Gun flint. Baby Farm. Miss Kirkwood.
51. Six gun flints. Baby Farm. J. Kirkwood.

52. Part of white clay pipe stem on which are stamped two lozenge-shaped figures, quartered, each quarter containing a *fleur de lis*. Baby Farm. J. Kirkwood.

53. Iron pipe tomakawk, complete, with perforated handle. No record. Y. P. col.

54. Iron nodule containing pyrites. Found with some Indian relics in Huron Tp. William Welsh, Amberly.

CASE B.

BROKEN AND UNFINISHED ARTICLES SHOWING METHODS OF WORKING.

1-11. Pieces of red freestone and grey limestone smoothed and marked off as if preparatory to making beads. G. Lougheed, Nottawasaga.

12. Stone marked to form pipe. Head portion broken. G. Lougheed, Nottawasaga.

13. Part of what was probably a pipe stem. Now in two pieces—broken lengthwise and showing the bore. A. Lougheed, Nottawasaga.

14. Piece of limestone in process of being shaped as a pipe-head (probably). This illustrates one of the methods of cutting through stone. A row of holes has been bored in the direction of the proposed cut. When broken off, grinding or rubbing has been begun to efface the marks left by the holes.

15. Small, roughly oblong piece of limestone about $1\frac{1}{4}$ in. long, $\frac{1}{2}$ deep, and nearly $\frac{1}{2}$ in. thick. A hole (oval) about $\frac{3}{4}$ in. long has been bored on one of the narrow sides, and this penetrates to the opposite side where it terminates as a small round hole. The latter side shows that the piece has been detached from another larger or smaller portion by cutting all round to weaken before breaking. The carving of a human face has been begun on one end. A. Lougheed, Nottawasaga.

16. Portion of large implement quite unlike anything else in the collection. Marks of work are perfectly evident, but the specimen is not easily described. Pike's Farm, Wolfe Island.

17. Rudely formed, or unfinished implement of limestone, semicircular, with projection like a handle on the straight side. Has a general resemblance to an old-fashioned hand meat-chopper. Length of blade $5\frac{1}{2}$ in. and from edge to end of handle $4\frac{1}{4}$ in. Middlesex Co. M.

18. A flat ovate, striated slate pebble, 4 in. long, greatest width $2\frac{3}{8}$, and greatest thickness $\frac{3}{8}$ inch. Is deeply cut lengthwise into five sections. Incisions on both sides. Apparently the intention was to break the several pieces off for beads or other ornaments. McGillwray Tp., Middlesex. M.

19. Small piece of limestone pebble, showing a cut-off mark corresponding in kind to that on No. 15 in this case, but much more distinct.

20. Two specimens marked A and B. These are unfinished beads of red freestone like Nos. 1 to 7. The smaller piece, 20 A, is only half an inch long, and has been bored from one end. The larger piece $1\frac{3}{8}$ in. long is unbored. G. Lougheed, Nottawasaga.

21. A spoiled or unfinished tablet. (See description, cases N and O.) The four sides have been hollowed to depth of $\frac{3}{8}$ of an in., and the corners are rounded. One hole has been partly bored. S.
22. Small cylindrical piece of limestone, 1 in. long, and about $\frac{5}{8}$ in. diameter. One side is split off, evidently as the result of boring which has been begun at one end. Albert Loughheed, Nottawasaga.
23. A waterworn, nearly globular pebble; longest diameter $2\frac{1}{2}$ in. Transverse to this a beginning has been made in cutting a groove, as if for attachment to a handle by means of a thong. J. Wood, Lawrenceburg, Indiana.
24. A waterworn stone. Appears to have been at first globular, and $2\frac{1}{4}$ in. in diameter. Two opposite sides have been rubbed down presenting nearly parallel faces $1\frac{1}{2}$ in. across. M.
25. A spherical waterworn pebble, $2\frac{1}{4}$ in. in diameter. A hole has been bored into it about $\frac{1}{4}$ in. deep. Brookfield, Missouri.
26. A waterworn granitic pebble, $2\frac{1}{4}$ in. in diameter. Shows traces of hand-rubbing in two or three places. Mercer Co., Kentucky. Prof. Moritz Fischer, Curator Ky. Geol. Sur. Mus., Frankfort.
27. Granite, $4\frac{1}{4}$ long, $3\frac{1}{4}$ wide, and $1\frac{3}{4}$ thick in the middle. Although still rough, an immense amount of work must have been done on this stone. The two ends have been pecked down and rounded to half the thickness of the middle, where a ridge has been left, running from side to side as if the intention had been to bore through in that direction. Point Edward, Dr. Rear, Toronto.
28. Waterworn stone, 5 in. long, $2\frac{3}{8}$ wide and nearly 2 in. thick; the natural shape has suggested an ax or other tool, and one side has been pecked to make it correspond with the opposite side. The material is a close-grained, dark grey limestone. Dr. Craig, Lawrenceburg, Indiana.
29. Fragment of steatite vessel. Three slit-like holes in this piece are probably of recent origin. Alamance Co., N. Carolina, Prof. Jos. Moore, Earlham College, Richmond, Indiana.
30. Slate tablet 5 in. long, $3\frac{1}{2}$ wide. Apparently unfinished—holes not bored. Lot 25, con. 22, McGillivray Tp. M.
31. Slate tablet, 4 in. by $2\frac{1}{4}$ in. No holes. Lot 4, con. 4. Biddulph Tp. M.
32. Unfinished implement or weapon of veined blue slate, like 43, 44, 46 and 47, Case M. Dr. Craig, Lawrenceburg, Indiana.
33. Unfinished slate tablet, $4 \times 2\frac{1}{4}$, with corners rounded. Unbored. S.
34. Slate, three inches long, two and a half wide at one end, one and three-fourths at the other; one inch and a quarter thick at the wider end and having roughly convex sides. At the larger end two holes have been drilled, one 9-16 of an inch in diameter, is $1\frac{1}{8}$ inch deep; the other $\frac{3}{8}$ inch diameter, is only $\frac{1}{4}$ inch deep. The inner or adjoining sides of the holes have met giving the drilling a figure 8 outline, the longer diameter of the double boring being only 1 1-16 inch. At the smaller end the hole is 10-16 inch diameter, and $1\frac{3}{8}$ inch deep. Although the length of the borings is equal to the total length of the specimen the holes do not meet, the deeper of the two at the wider end having been drilled somewhat aslant. McGillivray, Tp. Middlesex. M.
35. Piece of argillite, $9\frac{3}{4}$ in. long, about an inch in diameter, with roughly clipped or pecked, rounded sides, along one of which, as well as at one end, an angular groove has been cut. M.

36. Argillite, 4 in. long, 1 inch in diameter at thick end, and tapering to a point. Is half of an implement like 30 and 31 in case M. M.

37. Tablet (?) $4\frac{1}{2} \times 2\frac{1}{4}$ in. greatest measurements. Thickness in middle, $\frac{1}{2}$ inch. Edges convex, one side slightly convex, the other very much so. Specimen carries what seem to be crystals of calcite. Miss Maria Tipton, Paris Kentucky.

38. Tablet of brown argillite, $3\frac{1}{2} \times 1\frac{1}{2}$. 5-16 inch thick. Edges convex. One side nearly flat, other convex. No holes. M.

39. Tablet, much like 38 in material and form, but $4\frac{1}{2} \times 1\frac{1}{2}$. S.

40. Small hatchet-shaped piece of limestone, showing signs of having been used to sharpen, polish or rub other material. One corner is coated with iron rust owing to the proximity of a small quantity of hematite where it was found, near the east end of Tidd's island opposite Gananoque.

41. Pipe-stem of limestone $3\frac{1}{4}$ in. long. The workmanship is suggestive of European influence.

42. Much like 41, but only 2 in. long. Both from A. Lougheed, Nottawasaga.

43. Unfinished pipe-stem of limestone, $2\frac{3}{4} \times 1$ inch and roughly square. Has evidently been separated from the head after the bowl was bored. Instructive as showing mode of reducing to required size. Deep cuts have been made with flint flakes at intervals of from 3-16 to $\frac{1}{4}$ of an inch, and the intervening portions have been broken off. A. Lougheed, Nottawasaga.

44. Seems also to have been part of a pipe. It is $3\frac{1}{4}$ inches long, $1\frac{1}{2}$ thick in one direction, and only a little more than an inch in the other. The two wider sides are flattened and the other two are rounded. Near to one of the round sides a $\frac{1}{2}$ inch hole has been bored nearly $1\frac{1}{4}$ in. deep, in the direction of the longer axis. The same end also shows that the piece of stone has been cut from another by notching deeply (3-16 of an inch) all round, and then breaking forcibly.

45. A roughly blocked out pipe-head of marble, intended for a hole to receive a wooden stem. Vaughan Tp. Dr. Orr, Maple.

46. Two fragments of pipe-stems, limestone, square. Geo. Lougheed, Nottawasaga.

47. Broken pipe-stem, limestone, rounded. Albert Lougheed, Nottawasaga

48. Roughly blocked pipe (?) Perhaps only a water worn stone. S.

49. Piece of limestone, cylindrical, 1 in. in diameter, a hole $\frac{1}{2}$ of an inch in diameter has been bored lengthwise close to the outside. The portion between the hole and outside has then been removed, the work now looking like a groove made from the outside. David Melville, Creemore.

50. Rough block for pipe. Baby Farm, Lambton Mills. J. Kirkwood.

51. Three pipe-stems. (See remark, 41.) G. Lougheed, Nottawasaga.

52. Spoiled pipe-head, limestone. The bowl has been badly bored and the stem is broken off. This specimen, three inches long and two wide at the broken mouth, shows that both sides of the bowl have been lined up the middle exteriorly to aid the eye in directing the drill. G. Lougheed, Nottawasaga.

A to S.—Contents of a grave opened on Noncon island by Mr. A. Stevens. The find consists of two bone awls or needles, three tips of deer-horn, a bone spear-head, a wolf's jaw bone, a stone ax, a perforated slate tablet, a bit of pottery, seven flints, and two small pieces of graphite. A. F. Chamberlain, Toronto.

CASE C.

ROUGH FLINTS.

- 1 to 9. Palæolithic flints from Sussex Mills, England. W. Ransom, Hitchin.
10. Large flint core 10½ inches long, from which flakes have been chipped Le Grande Persigny, France. W. Ransom, Hitchin, England.
11. Flint knife. Persigny, France. W. Ransom, Hitchin, England.
- 12 to 18. Palæolithic implements of flint varying in color from light gray to almost black, and in size from three inches to six inches long.
19. Palæolithic implements. Bedford, Eng. W. Ransom, Hitchin, England.
20. Small barbed arrow head 1½ inches long without neck. Derry, Ireland. W. Ransom, Hitchin
21. Small and beautiful barbed and necked arrow head, ⅝ in. long, and ⅜ in. across base of barbs. Antrim, Ireland. W. Ransom, Hitchin, England.
22. Leaf-shaped flint, 1¼ in. long, and 1 in. wide. Antrim, Ireland. W. Ransom, Hitchin, England.
23. Arrow head 1¼ in. long barbed and necked. Antrim, Ireland. W. Ransom, Hitchin, England.
24. Fragment of neolithic implement, apparently about half of a bored axe or club-head, originally upwards of six inches long, but now broken across the hole. Sussex mills, England. W. Ransom, Hitchin, England.
25. Small stone axe in deer-horn handle, from lake-dwelling, Switzerland. W. Ransom, Hitchin, England.

The foregoing were procured through Mr. Jas. H. Pearce of the Institute.

Case C. includes also sixty-nine leaf shaped "flints" from 2 inches to 4 inches long, found in a heap a few inches below the surface, on the farm of Arthur Seabrook, Komoka.

Eight large and rudely chipped implements from Wolfe Island.

And coarse specimens from N. Carolina, Alabama, Georgia, Kentucky, Indiana, Missouri, Ohio and Wyoming.

All in this case are of such a character as would be called "palæolithic" if our data permitted. The total number is nearly 200.

CASE D.

TYPICAL FLINTS.

Contains 240 specimens of "flints" varying from half an inch to six inches in length, and were probably all used as spears, lances or arrows. The arrangement in this case is for the purpose of illustrating, sizes, shapes, material and modes of fastening to shafts.

Mainly of chert, some are of flint, others of jasper, chalcedony, obsidian and agate. One is of pure quartz.

The territory represented covers many of the United States as well as Ontario.

CASE E.

MISCELLANEOUS FLINTS.

Contains about 200 small flaked "flints" mainly from the United States. The chief donors were Drs. Craig and Collins, Lawrenceburg, Indiana, the Natural History Society of Brookville, Indiana, the Geological Survey of Kentucky; Prof. Jas. Moore, Earlham College, Richmond, Ind.; E. T. Hummell, Decatur, Alabama; the Society of Natural History, Cincinnati; and Prof. J. L. Deming, of the Technological Institute, Boston, Mass.

CASE F.

FLAKED TOOLS AND WEAPONS.

1. Shaly chert, almost black, $8\frac{3}{8}$ in. long, $4\frac{1}{2}$ wide, and averaging about $\frac{1}{4}$ inch thick; no notch for attachment to handle; general outline, an irregular oval. An intrusive vein one line in thickness crosses it at a slight angle $2\frac{1}{2}$ in. from the point. May have been intended for a spade or a hoe, but shows no signs of use. From a grave mound in Tremont Park, Tidd's Island, R. St. Lawrence (opposite Gananoque). C. A. See, Tremont Park.
- 1 $\frac{1}{2}$. Quartzite, $5\frac{1}{2}$ in. long by $2\frac{3}{4}$ wide, about $\frac{3}{4}$ inch in thickest part, has been notched, but is broken at shoulder; rudely chipped, and of irregular outline. Tremont Park, Tidd's Island. C. A. See.
2. Chert, dark brown, $9\frac{1}{4}$ in. long by $3\frac{3}{4}$ inches wide, and about $\frac{1}{4}$ in. thick in middle; broken in three pieces; no notch; signs of wear slightly observable. Tremont Park. C. A. See.
3. Chert, dingy grey, $8\frac{1}{2}$ in. long by $3\frac{1}{2}$ wide and $\frac{3}{8}$ in. thick in the middle, sides unsymmetrical; notched; neck $\frac{3}{4}$ inch long. Tremont Park. C. A. See.
4. Flint; not homogeneous; 8 in. long by $3\frac{1}{4}$ wide, greatest thickness 5-16 in.; thicker towards each end than in the middle; symmetrical; no notch, leaf-shaped, pointed and slightly worn. Tremont Park. C. A. See.
5. Veined quartzite, $6\frac{1}{2}$ in. long by 3 inches wide, leaf-shaped, with a comparatively small neck, thin in proportion to length. Tremont Park. C. A. See.
6. Chert, $7\frac{1}{2}$ in. long by $2\frac{3}{8}$ in. wide at base; slightly barbed; neck broken; thin and almost symmetrical; lanceolate. Tremont Park. C. A. See.
7. Quartzite, translucent, 6 in. long by $2\frac{1}{8}$ in. wide; notched neck; sides not symmetrical. Tremont Park. C. A. See.
8. Chert, grey and brown, not homogeneous, $9\frac{3}{8}$ in. long by $3\frac{5}{8}$ in. wide, leaf-shaped; very thin; symmetrical, but slightly curved in direction of flat-side. Tremont Park. C. A. See.
- 9 to 14. Fragments of similar weapons or tools from same place.
- 14 $\frac{1}{2}$. Quartzite, translucent, 4 in. long by $2\frac{1}{8}$ in. wide; symmetrical and somewhat thick in proportion to length; leaf-shaped. Tremont Park. C. A. See.

15. Chert, $11\frac{1}{2}$ in. long by $3\frac{3}{8}$ in. wide; leaf-shaped; fractured slightly at base; about $\frac{3}{4}$ in. at the thickest part; symmetrical; this is the largest flaked implement in the museum. Pickering Tp. Jas. Dickson, Fenelon Falls.

16. Cherty limestone, $7\frac{1}{4}$ in. long by 3 in. wide; very thin; notched neck. Wolfe Island.

17. Fine chert, $6\frac{1}{4}$ in. long by $3\frac{3}{8}$ in. wide; short and deeply notched neck, forming semi-barbs; beautiful heart-shaped outline. Wolfe Island.

18. Coarse chert, $4\frac{7}{8}$ in. long by $3\frac{7}{8}$ in. wide; neck $\frac{3}{4}$ in. long and 1 inch wide; somewhat rudely chipped; very broad in proportion to length. Wolfe Island.

19. Chert, 5 in. long by $2\frac{3}{4}$ wide; slightly barbed; neck $\frac{3}{4}$ in. long by 1 in. wide. In this specimen there is a well-defined oval nucleus exactly in the middle and showing both sides; on one side this measures about 2 in. by $1\frac{1}{2}$ in., and on the other $1\frac{3}{4}$ in. by $1\frac{3}{8}$. Wolfe Island.

20. Fine veined chert, $5\frac{1}{2}$ in. long by $2\frac{1}{2}$ in. at base; sides little curved; straight neck $\frac{3}{4}$ in. long. Edges thinned from left side; very thin in proportion to length. Biddulph Tp. M.

21. Chert, $5\frac{1}{2}$ in. long by $1\frac{7}{8}$ wide; point broken; straight neck $1\frac{1}{4}$ inch long, very thick. Sarnia Indian Reserve. M.

22. Impure chert, $5\frac{1}{2}$ in. long by $2\frac{1}{4}$ in. wide; sides almost straight; notched neck. East Williams Tp. M.

23. White chert, $8\frac{1}{4}$ in. long by 3 in. wide; unsymmetrical; leaf-shaped. Plympton Tp. S.

24. Chert, 8 in. long by $1\frac{5}{8}$ in. wide; symmetrical and gracefully formed; neck faintly marked off from body, $1\frac{5}{8}$ inch long. McGillivray Tp. M.

25. Chert, $5\frac{1}{2}$ in. long by $2\frac{1}{2}$ wide; notched neck $\frac{3}{4}$ in. long and same width; body comparatively thick. Wolfe Island.

26. Chert, $5\frac{3}{8}$ in. long by $1\frac{7}{8}$ in. wide, squarely-shouldered neck, $\frac{3}{4}$ in. long and pointed. McGillivray Tp. M.

27. Chert, $4\frac{3}{4}$ in. long by $1\frac{5}{8}$ in. wide; slightly notched neck; edges symmetrical, one side flat. Middlesex, Co. M.

28 to 39. Chert, group of weapons from $4\frac{1}{2}$ in. to $8\frac{1}{2}$ in. long, and from $2\frac{1}{2}$ in. to $3\frac{1}{4}$ in. wide at base. With the exception of No. 28, they are all of the same pattern, being square-shouldered and having heavy, strong necks about an inch long. No. 28 is almost leaf-shaped, the neck being abortive. These "flints" were found together at the edge of a swamp on gore lot 27; N. B., West Williams Tp. M.

40. Dark brown flint, $5\frac{1}{4}$ in. long by $1\frac{5}{8}$ in. wide; notched neck $\frac{1}{2}$ in. long, and forked at base. Wolfe Island.

41. Brown cherty limestone, $5\frac{1}{8}$ in. long by $1\frac{1}{8}$ in. wide, neck broken, Plympton Tp. S.

42. Chert, a beautiful leaf-shaped specimen, $8\frac{1}{2}$ in. long by $2\frac{1}{2}$ in. wide, and scarcely a quarter inch thick; edges flaked chiefly from right side. Wolfe Island.

43. Chert, leaf-shaped, $7\frac{1}{2}$ in. long by $2\frac{1}{2}$ in. wide; tip broken, symmetrical and elegant. McGillivray Tp. M.

44. Very coarse chert, leaf-shaped, $6\frac{3}{4}$ in. long by 2 in. wide; rudely chipped. Biddulph Tp. M.

45. Chert, $5\frac{1}{8}$ in. long by $2\frac{5}{8}$ in. wide; notched neck, $\frac{1}{2}$ in. long by $1\frac{1}{4}$ in. wide; roughly flaked and unsymmetrical. Wolfe Island.
46. Chert, $5\frac{1}{4}$ in. long by $1\frac{3}{8}$ in. wide; square shouldered, neck $\frac{3}{4}$ in. long. This specimen is very thick in the middle in proportion to length.
47. Coarse chert, 5 in. long by $1\frac{3}{8}$ in. wide; neck has a slightly square shoulder, and is $1\frac{1}{8}$ in. long, being rounded at base. Madison Co., Ky. Dr. Collins, Lawrenceburg, Ind.
48. Fine chert, $4\frac{3}{4}$ in. long by $1\frac{1}{2}$ in. wide at base, leaf-shaped; edges flaked from left side and slightly serrated; body almost flat otherwise and about $\frac{1}{4}$ inch thick. Fayette Co., Kentucky. Dr. Collins, Lawrenceburg, Ind.
49. Light bluish flint, $6\frac{3}{4}$ in. long by $2\frac{1}{2}$ in. wide at base; leaf-shaped; edges rudely flaked. Forest. S.
50. Milky quartzite, $5\frac{3}{4}$ in. long by $1\frac{1}{2}$ in. wide; neck notched and equal in breadth to base of body; tip broken; body $\frac{3}{8}$ in. thick in middle, cross section would show a good ellipse; not quite symmetrical in the edges. St. Mary's. S.
51. Coarse chert, 5 in. long by $2\frac{3}{8}$ in. wide; leaf-shaped; edges symmetrical and much curved, the general outline being more egg-shaped than is usual. No locality. S.
52. Very dark (almost black) chert, with light colored veins; $4\frac{5}{8}$ in. long by $1\frac{3}{4}$ in. wide; middle of body $\frac{3}{8}$ inch thick and smoothly flaked to edges; deeply notched neck, which is also hollowed at base; very symmetrical. North Branch, Mich. S.
53. Chert, $3\frac{3}{4}$ in. long by 2 in. wide; straight neck 1 in. long; barb $\frac{1}{2}$ in. long, one barb off. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.
- 54 to 58. Five notched necked "flints," varying from 4 in. to $4\frac{1}{2}$ in. long, and from 2 in. to $2\frac{3}{8}$ in. wide. McGillivray Tp. M.
59. Chert, 6 in. long by $2\frac{3}{8}$ in. wide; point broken; straight neck; rudely flaked. West Williams. M.

CASE G.

BONE AND HORN.

1. Small turtle shell perforated with sixteen holes. Has probably been a rattle. Beverly. Dwyer col.
2. Bone, somewhat cylindrical, $1\frac{1}{4}$ in. diameter, rudely worked at, each end. York Tp. B. Jackes, Toronto.
3. Splinter of deer-horn, 9 in. long and about 1 in. wide. Edges appear to have been hacked with a sharp tool. One end roughly sharpened; other end broken. Nottawasaga. Lougheed col.
4. Bone of beaver's tail. Found with many relics in London, Ont., by Jas. McDowell, 1849. M.
5. Part of turtle shell, semicircular, $2\frac{3}{4}$ in. diameter, perforated with three holes.

6. Gouge or chisel of deer-horn, $7\frac{1}{4}$ in. long and $2\frac{1}{2}$ in. across widest part; $1\frac{1}{2}$ in. behind lip. Beverly. Dwyer col.
7. Horn chisel, 7 in. long, and $1\frac{1}{4}$ wide. Considerably injured; head broken. York Tp. Y. P. col.
8. Bone knife, 8 in. long. Y. P. col.
9. Circular portion of human skull, 4 in. diameter, three holes bored 1 in. apart in middle, as if at the angles of an equilateral triangle. Three smaller holes have also been bored close to the margin triangularly. York Tp. Geo. Miller.
10. Circular portion of human skull, 4 in. diameter, unperforated. No work done on it beyond rubbing down the edges smoothly, and scouring the outside. Aurora, York Tp. S.
11. Portion of human skull, somewhat oval. Longer diameter, $4\frac{1}{2}$ in., shorter diameter, $3\frac{5}{8}$ in. Perforated with seven holes, six of them in pairs from $\frac{5}{8}$ in. to 1 in. apart, but not regularly arranged. The odd hole is near the margin of the longer axis. Beverly. Dwyer col.
- 12-16. Horn tips sharpened to chisel points. Kitchen midden. Vancouver, British Columbia. James Johnson, Vancouver.
17. Rude bone awl. Kitchen midden. Vancouver. James Johnson, Vancouver.
18. Bone awl—ditto.
19. Bone awl—ditto. Point broken.
20. Deer-horn fork; one tip broken. Has had a hole at base of prong. Lower part now broken away; 4 in. long. Beverly. Dwyer col.
21. Deer-horn fork, $4\frac{1}{2}$ in. long, and tip of longer prong broken. A $7/16$ inch hole bored at base of fork $2\frac{1}{2}$ in. from tip of smaller prong. A base of 2 inches extends beyond the hole, where the cut-off marks are very plain. Beverly. Dwyer col.
22. Horn-tip, split and blackened by fire; 3 in. long. Point has been sharpened. Noncon Island, Lake Seugog. Jas. Stevens, per A. F. Chamberlin.
23. Bone spear or harpoon, $5\frac{1}{2}$ in. long, but a portion of the shaft has been broken off. Greatest width at end of shaft $11/16$ in., 2 in. from point shaft narrows to $\frac{3}{8}$ in., and the head consists of a flat portion decreasing from $9/16$ in. to a point, and having on each side five barbs. The bone is grooved longitudinally on each side. Near Simcoe Town. S.
24. Horn spear or harpoon (single-barbed), 8 in. long. Breadth of shaft from hole 1 in. This part is flat and 2 in. long, with square shoulders where it meets the middle portion which is a flattened oval $3\frac{3}{8}$ in. long from the shoulders to the inner angle of the barb. The barb itself is $\frac{3}{8}$ in. long, and from its tip to the point of the spear is $2\frac{3}{8}$ in. Beverly. Jas. Rae.
25. Bone spear or harpoon (three-barbed on one side) $6\frac{1}{2}$ in. long, point broken a little; barbs deeply cut. From broken point to tip of first barb is 2 inches; from tip of first to tip of second barb $1\frac{5}{16}$ in.; from tip of second to tip of third barb $1\frac{3}{8}$ in. The shaft from inner angle of third barb is 2 in., $1\frac{1}{4}$ in. from shaft end and below the third barb; close to edge is an oval hole about $\frac{1}{4}$ in. the longer way. The shaft end has been ground down to a chisel point, and has no doubt had a secondary use. Victoria Co. Dickson col.

26. Harpoon, three-barbed, $5\frac{3}{8}$ in. long; hole $1\frac{1}{2}$ in. from shaft end, and eccentric towards barbed edge. Barbs slightly ogee on edge; axils well rounded. York Tp. Jackes col.

27. Point of spear-head $2\frac{3}{4}$ in. long, three barbed on each side. Shaft portion remaining $1\frac{1}{4}$ in. long, and $\frac{3}{8}$ in. wide. Five barbs square shouldered—one a little under cut. Breadth across widest portion of barbed end $\frac{1}{2}$ inch. Lake Medad.

28. Fish-hook. Length from upper end to curve $3\frac{7}{16}$ inch; barbed end from curve to point $2\frac{1}{16}$ in.; thickest portion of shaft at curve $\frac{1}{4}$ in., tapering to $\frac{1}{8}$ in. near upper end; shaft terminates in small knob about $\frac{1}{4}$ in. diameter; carved part averages fully $\frac{1}{4}$ in., with inside fairly rounded, and outside more angular and roughly finished; barb from tip to tip $1\frac{7}{16}$ in., with axil $\frac{3}{16}$ deep; width between shaft and barb axil $\frac{1}{2}$ in., between tip of barb and inner curve $\frac{1}{4}$ in., and between tip of hook and shaft $\frac{3}{8}$ in. One side of curve appears as if gnawed, leaving four bars with a slight bend running across it from the barbed side towards the shaft side. Lindsay. S.

29-30. Two halves of beaver's upper jaws. Grave, Onentisati, Simcoe Co.

31. Lower jaw of beaver. Grave, Onentisati, Simcoe Co.

32-34. Bear's teeth. Grave near Orillia. Jas. Fraser, Craighurst.

35-41. Bears' teeth. Village site, Nottawasaga. Loughheed col.

42. Bear's tooth. Ste. Marie, Simcoe Co.

43. Walrus tooth. Balsam Lake, Ont. T. Bell.

44-52. Small compressed pear-shaped teeth (elk's) about 1 in. long and $\frac{1}{2}$ in. wide. These are ground smooth at small end and are then perforated. No locality. Y. P. col.

53. Bone $2\frac{3}{4}$ in. long, carved to represent a fish. The outline is somewhat whale like; $\frac{5}{16}$ in. from nose and $\frac{1}{8}$ in. from throat, are what may have been intended for gills (not if a whale). A small hole has been bored from side to side, $\frac{3}{16}$ in. in advance of this and a little higher are two small depressions. These are too far forward for eyes, and too high as well as too far back to be nostrils. They were probably meant for eyes. Mouth deeply cut and extending back almost to the gills. No imitation of fins or tail. At tail end $\frac{7}{16}$ in. on the upper side relieved by nine lines cut at right angles to long axis, and eight lines crossing these diagonally from left to right. Exeter. S.

54. Human form—bone; $\frac{31}{16}$ in. long; width at shoulders $\frac{9}{16}$ in. Right arm placed on left shoulder. Left arm extending to right side of waist. No feet. The figure is proportionate. While head and neck measure $\frac{7}{16}$ in., the body is fully $1\frac{9}{16}$ in., and the legs only $1\frac{1}{16}$ inch long. Beverly Tp. Rae col.

55. Bone mask, human; $2\frac{1}{8}$ in. long, and $\frac{5}{8}$ in. wide. Eye holes are bored through. Nottawasaga. Loughheed col.

56. Horn, spear or harpoon, one barb. Shaft end $3\frac{1}{2}$ in. long, and $1\frac{1}{8}$ wide. Hole near middle two inches from end. Flat portion at shaft end shouldered down to $\frac{5}{8}$ in., then rounded on edges to tip. Barb, tip to tip, $2\frac{1}{16}$. Axil $\frac{1}{4}$ in. deep, and nearly same width. Shaft end behind hole, whittled, and hole has been cut through, not bored; or else has been enlarged by cutting after boring. York Tp. Long col.

57. Deer-horn fork, $3\frac{1}{2}$ in long, cut off squarely at butt or lower end. One prong is $2\frac{1}{8}$ in. and the other $1\frac{3}{4}$ in. long. Greater diameter of butt at

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cut $\frac{3}{4}$ inch. Across upper side of larger prong, and lower side of the other, and in a line with the axil two grooves are worn as if the object had been employed as a tool to smooth thongs or sinews by rubbing them lengthwise. About midway below the prongs other fainter grooves are perceptible. Humberstone Tp., Welland Co. Cyrenius Bearss.

58. Bone chisel $11\frac{7}{8}$ in. long, and averaging $1\frac{1}{8}$ in. across blade. This tool is made of an undetermined quadruped's leg bone, a cross section of which is roughly quadrangular. The upper or handle end is almost square and about $1\frac{1}{2}$ in. on each side. For $2\frac{1}{4}$ in. the bone has been left intact, beyond rubbing the joint down to a level surface. At this distance the wall on one side is cut sharply down until the cavity of the bone is reached, and the whole side is made to taper beautifully to the lip, giving the tool when viewed edgewise the appearance of an elongated wedge. Nottawasaga. Thomas White.

59. Bone chisel or gouge, $11\frac{1}{4}$ in. long. This appears to be made from a leg-bone, but is quite unlike No. 58. A cross section of it would be oval, and the diameter is less in the middle than at the ends, being $1\frac{1}{2}$ in. near the lip, 2 in. near the joint, and only $1\frac{1}{4}$ in. at the middle. The processes at the joint have not been altered in any way, and the rubbing down to produce a cutting edge extends back only about $5\frac{1}{2}$ in. The tool bears evidence of long use. Nottawasaga. David Melville.

60. Five wolf's teeth. Village site. Nottawasaga. Lougheed col.

61. Cylindrical bone $3\frac{1}{4}$ in. long, and $\frac{5}{16}$ in. diameter, rounded at one end. Humberstone Tp. Cyrenius Bearss.

75. Portion of human skull like No. 10. Vaughan Tp. Dr. Orr, Maple.

ESKIMO. Presented by F. F. Payne, Esq.

62. Comb, $2\frac{1}{2}$ in. from back to point of teeth, $1\frac{1}{2}$ wide.

63. Four pendants, conical and perforated at flattened ends.

64. Powder measure, $1\frac{5}{8}$ in. long, $\frac{1}{2}$ in. wide and $\frac{1}{2}$ in. deep. Formed somewhat like a grocer's scoop. A small hole for suspension when carried is bored through the lower corner of the larger end.

65-66. Two human figures in bone, $1\frac{3}{4}$ in. long.

67. Forty-three pieces of bone from $\frac{3}{8}$ to $1\frac{1}{8}$ in. long, and from $\frac{3}{8}$ in. to $\frac{5}{8}$ wide, generally decreasing in width towards one end which is rounded. These are marked like dominoes. The highest number on this set is 39. The game is not played as are dominoes, but seem to be a kind of grab-game.

68. Bone thimble.

69. Bear, $1\frac{3}{4}$ in. long.

70. Seal, $1\frac{5}{8}$ in. long.

71. Fish, with fins and tail, $1\frac{1}{2}$ in. long.

72. Water-fowl, $1\frac{1}{2}$ in. long.

73. Dog, 1 in. long.

74. Toothpick, about 2 in. long.

CASE H.

BONE AND HORN.

- 1 to 24. Bone awls or needles from 7 in. to 3 in. long. York Tp. Wm. G. Long.
25. Eyed needle, $3\frac{3}{8}$ in. long, $\frac{1}{4}$ in. wide and $\frac{1}{16}$ in. thick in middle, oval hole, $\frac{3}{16}$ in. long and less than $\frac{1}{16}$ wide at an in. from end. Grooves on both sides extending from ends of hole, bone slightly curved, with natural hollow on concave side. Both ends thinned and rounded, but left flat. Point end the more so, being highly polished and very sharp. York Tp. Wm. G. Long.
- 26 to 37. Bone awls from $3\frac{1}{2}$ to $2\frac{1}{2}$ in long. Various localities.
- 38 to 43. Bone awls from $4\frac{1}{2}$ to 3 in long. York Tp. B. Jackes, Toronto.
- 44 to 45. Bone awls. London Tp. M.
46. Bone awl. Orentisati, Simcoe Co.
- 47 to 49. Bone awls. Beverly Tp. Dwyer col.
- 50 to 54. Tarsal bones of deer, two are ground flat on both sides exposing the cavity, one has had the larger end cut wholly out and a small hole bored obliquely through the opposite end. One has been ground flat on one side but is otherwise intact, and one has been bored into from each end.
55. Two fragments of horn implements and two splintered bones, (one whittled) from kitchen midden, British Columbia. Jas. Johnson, Vancouver.
56. 2 bone awls, $5\frac{1}{2}$ in and $2\frac{3}{4}$ in long. Dumfries Tp., near Galt. Jas. G. Caven, Toronto.
57. Almost cylindrical bones, 2 in. long and $\frac{3}{8}$ in. diameter, rounded at both ends. Nottawasaga. Loughheed, col.
58. Bone, small, 3 in. long, cut at both ends, has one notch; perhaps a tally or record bone. Beverly.
59. Bone $3\frac{1}{4}$ in. long and from $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in diameter, cut at both ends. Either a bead or a tally bone. Beverly.
60. Five bone beads from 2 in. to $3\frac{3}{8}$ in. long. Nottawasaga. Thos. White.
- 61 to 64. Four bone beads, respectively, $4\frac{1}{4}$, $2\frac{5}{8}$, $2\frac{3}{8}$ and 1 in. long. Y. P. col.
65. Deer-horn tip, cut at large end and ground at point, 5 in. long Y. P. col.
66. Cylindrical bone $3\frac{3}{8}$ in. long, general diameter 5-16 in., rounded at both ends. From larger end two parallel lines have been scratched lengthwise $1\frac{1}{4}$ inches between which are four diagonal crosses.
67. Horn tip $3\frac{3}{8}$ in long, ends rounded, weathered. Y. P. col.
68. Horn tip 2 in. long, ends rounded. Y. P. col.
69. Cylindrical bone bead $3\frac{1}{8}$ in. long and $\frac{1}{2}$ in. diameter. Guelph Tp. Dr. Hugh G. Roberts.
- 70 to 72. Three bone beads respectively $3\frac{1}{4}$, $1\frac{3}{8}$ and $1\frac{1}{8}$ in. long. Beverly.
73. Oblong section of horn 2 in. long, smoothed on all sides and one end; other end broken off. Has four transverse slight cuts on outer side, as if marked for cutting off. Beverly. Dwyer col.

74. Tally bone 3 in. long, $\frac{3}{8}$ in. diameter, triangular at one end and rounded at the other. Has three rows of small notches on edges extending in line of angles. On each of two rows are twenty-nine cuts, and on the third twenty-eight. Beverley. Dwyer col.
- 75 to 80. Six bone beads about 1 in. long. Waterdown.
81. Heavy bone bead $3\frac{7}{8}$ in. long and $\frac{1}{2}$ in. by 1 in. diameter. Dumfries Tp.
82. Bone bead $2\frac{3}{8}$ in. long. Dumfries Tp.
- 83 to 85. Three bone beads, 3 in., $2\frac{3}{4}$ in. and $2\frac{1}{2}$ in. long. Sarnia Tp.
86. Bone 2 in. long and 1 in. diameter, cut off squarely at smaller end leaving small portion of detached section adhering. Larger end has eight notches deeply cut leaving the margin like saw teeth round the cavity. Beverley. Dwyer col. A doubtful specimen.
87. Tarsal deer-bone, rubbed down a little on one side, opposite has four cross-bars of a dark color as if burnt. Dumfries Tp.
88. Tarsal deer-bone, on one side ground flat exposing cavity at upper end. Opposite side ground in such a manner as to suggest a whistle. Dumfries Tp.
89. Portion of deer-horn, near base 3 in. long, marks of cutting at both ends. Beverley.
90. Tally-bone (?) $2\frac{1}{4}$ in long, triangular cross section; although slightly notched as in the case of those that seem to be records, this is somewhat dubious as the markings appear to be without any method or arrangement. Most of them also are on one of the flat sides and not along the ridges. Beverley. Dwyer col.
91. Bone bead 1 in. long, with two small notches near the larger end. Beverley. Dwyer col.
92. Fragment of bone $1\frac{1}{8}$ in. long with serrated edge and two deeply cut lines lengthwise. Beverley. Dwyer col.
93. Tally-bone $2\frac{3}{4}$ in. long, with three rows of lightly cut notches, counting respectively twenty-one, fourteen and fourteen. Beverley. Dwyer col.
94. Bone needle or awl $5\frac{1}{4}$ in. long, both ends damaged. Nottawasaga Loughheed col.
95. Tally-bone $3\frac{3}{8}$ in. long, notched on two ridges, total number twenty-eight or twenty-nine. Beverley. Dwyer col.
96. Small piece of bone $\frac{5}{8}$ in long, split, cut and smoothed at each end. Nottawasaga. Loughheed col.
- 97-100. Four bone beads, $4\frac{5}{8}$, $4\frac{3}{8}$, $4\frac{1}{4}$ and $2\frac{3}{4}$ in. long.
101. $2\frac{1}{4}$ in. long and $\frac{3}{8}$ in. wide at widest part. Less than $\frac{1}{8}$ in. thick, lance-shaped with notches forming a neck $\frac{1}{4}$ inch from wide end.
102. Horn bead, $1\frac{3}{4}$ in. long. Ohio, U. S. Soc. of Nat. Hist. Cincinnati.
103. Bone bead, $1\frac{1}{2}$ in. long. " " " " "
104. Bone bead, $\frac{3}{8}$ in. long. " " " " "
105. Cylindrical bone, $1\frac{1}{2}$ in. long, ends rounded like No. 57. Ohio, U. S. Soc. of Nat. Hist., Cincinnati.
106. Tally-bone 4 in. long, almost round at smaller end and oval (one side depressed) at the other, average diameter $\frac{1}{2}$ in. $1\frac{1}{8}$ in. from the larger end

and extending towards middle are two rows of markings, numbering in each case twenty-eight.* Tidd's Island, R. St. Lawrence.

107. Deer-horn tip bored out, $2\frac{7}{8}$ in long. Ohio, U. S. Nat. Hist. Soc. of Cincinnati.

108. Horn chisel pointed, 5 in. long. Ohio. Nat. Hist. Soc. of Cincinnati.

109. Idem, point broken.

110. Splintered bones, ash-heap. Lake Medad.

111. Small bone chisel. Nottawasaga. David Melville.

112. Bone awl or needle 6 in. long. Nottawasaga. Wm. Melville.

CASE. J.

SHELL.

1. Beads or wampum made from columellæ of *pyrula perversa*, probably. Beverly Tp. Dwyer col.

2. Four beads from $2\frac{1}{2}$ to 4 in. long and from $\frac{1}{4}$ in. to $\frac{1}{2}$ in. diameter, from columellæ of large shell, (species not identified) Beverly. Dwyer col.

3. Wampum (discs) from $\frac{1}{4}$ in. to $\frac{5}{8}$ in. diameter and averaging under $\frac{1}{2}$ in. thick. This large number was found in an ossuary in Beverly. Dwyer collection. Some of them (in one instance six) adhere face to face, showing that they had been carried or worn that way and not edge to edge as they are usually strung in collections.

4. Eight fragments of *p. perversa*, broken and cut in preparation for the making of wampum. Nottawasaga. Chas. Smith, Smithdale.

5. Six fragments of large shell partly cut in preparation for wampum. Nottawasaga. Lougheed col.

6. Two fragments, ditto. Beverly. Jas. Rae.

7. Two strips, ditto. Beverly. Dwyer col.

8. Three pieces. Two bored at margin and one about an inch long and $\frac{3}{8}$ inch wide, marked off into ten small squares.

9. Four fragments of *p. perversa*. Beverly Tp. Jas. Rae.

10. Fragment of large shell. Beverly. Dwyer col.

11. Two spiral shells from which the body whorls have been cut, leaving the columellæ bare. Through the anterior end of one a small hole has been bored. Nottawasaga. Lougheed col.

12. Spiral shell, bored through the tip. Nottawasaga. Lougheed col.

13. Wampum, (disc and cylinder). Nottawasaga. Lougheed col.

14. Wampum (disc) Beverly. Dwyer col.

15. Wampum, one large disc, fully $\frac{3}{4}$ in. diameter and four cylinders from $\frac{1}{2}$ in. to $1\frac{7}{16}$ in. long. Nottawasaga. Lougheed col.

16. Wampum (discs) Baby Farm, York Tp. W. Kirkwood.

* The recurrence of 28 and the lesser multiples of 7 are suggestive of lunar computation of time. Compare Nos. 93 and 95. Even in No. 90 the markings count not more than thirty, but lack of order and precision makes the number uncertain.

17. Solid cylinder $\frac{1}{2}$ in. long and $\frac{3}{8}$ in. diameter. Beverly Tp. Dwyer col.
18. Triangular bead. Beverly. Dwyer col.
19. Bead, columellæ of *p. perversa*, with hole through middle of side to meet other hole from end. Beverly. Dwyer col.
20. Eight beads, cylindrical. Some of these are very beautifully made. Baby Farm, York Tp. W. Kirkwood.
21. Pendants (two). Beverly tp. Rae collection.
22. Half of circular ornament $\frac{1}{2}$ in. diameter and $\frac{3}{16}$ in. thick, bored through edgewise and ornamented with dots round the margin as well as across. S.
23. Two triangular pieces of unio. Edges smoothed. Perforated near one angle.
24. Two long cylindrical beads and four small ditto. The latter probably of European manufacture. Beverly. Dwyer col.
25. Two beads (cylindrical). One $1\frac{1}{2}$ in. long and $\frac{1}{4}$ in. diameter is only bored a short distance from each end in the direction of its length, and holes are bored from the sides near the end to meet these. Beverly. Rae col.
26. Wampum (purple, nine pieces, discs). Nottawasaga, Loughheed collection.
27. Pendant, 2 inches long, $\frac{3}{8}$ inch diameter. Hole bored at one end and through corner. Nottawasaga. Loughheed col.
28. Two fragments of beads. Nottawasaga. Loughheed col.
29. Bead partly bored. Nottawasaga. Loughheed col.
30. String of columella beads. Y. P. col.
31. String of columella beads (small). Y. P. col.
32. String of wampum (disc). Y. P. col.
33. String of wampum (disc). Y. P. col.
34. String of wampum (disc). Y. P. col.
35. Unio valve, ossuary. Beverly. Dwyer col.
36. Three unio valves, ossuary. Ste. Marie. Simcoe County.
37. Large spatulate ornament, 8 in. long, 3 in. at widest and narrowing to rounded end about $1\frac{1}{4}$ in. across. Has two holes, one near middle and one near large end.
38. Ornament 2 in. long; half oval across short diameter. Hole bored near edge in middle of short side.
39. Circular ornament about $2\frac{3}{4}$ in. diameter. Has a $\frac{3}{8}$ inch hole near centre and two small holes $\frac{7}{8}$ in. apart, near edge.
40. Circular ornament $3\frac{3}{4}$ in. diameter, bored as in No. 39.
41. Half of ornament, originally larger than No. 40, bored in the same way as No. 39.
42. Fragment of ornament like Nos. 39 and 40.
43. Similar to Nos. 39 and 40. Stained green, with copper.
- No. 37 to 43 inclusive form part of the contents of a grave opened on the east side of Blackfriar's Bridge, London, Ont., in 1849, by a Mr. John McDowell. M.
44. Gouge—Barbadoes, W. I., Toronto Nat. Hist. Soc.
45. Gouge—Barbadoes, W. I., Toronto Nat. Hist. Soc.

46. Two unio valves with large hole punched through centre of each. Cincinnati Nat. Hist. Soc.
47. Wampum ("cock-spur shells"). Pacific coast. D. H. Price.
48. Circular ornament, like No. 39 to 43, but without the middle hole. Norfolk county. S.
49. Four unio valves from ash-heap. Lake Medad.
50. Is much like No. 37, but shorter and broader. Three holes are bored across the widest part, about $1\frac{1}{2}$ in. from the end. This is one of a few old gifts to the Institute but has no record.
51. Wampum (discs). Humberstone Tp. Mrs. Barney, sen.
52. Five pieces of black wampum (discs), two cylindrical and one serpentine bead. Y. P. col.
53. Wampum—unfinished specimen, incomplete rounding and boring. Beverly. Dwyer col.
54. Bead, $3\frac{1}{2}$ in. long, side broken exposing hole. Nottawasaga. Lough-head col.
55. Bead (cylindrical). Near Sarnia. S.

CASE K.

GOUGES.

1. $7\frac{1}{2}$ in. long; width at mouth or edge, $1\frac{1}{4}$ in.; hollowed, $3\frac{3}{8}$ in.; tapers to rounded head about $\frac{3}{8}$ in. in diameter. Limestone. Western Ontario.
2. $8\frac{1}{4}$ in. long; mouth, 2 in.; width in middle, $2\frac{3}{8}$ in.; at head $1\frac{3}{4}$ in.; thickness in middle, $1\frac{1}{4}$ in.; hollowed 4 in. Groove flared near lip. Sides sharply cut and narrowing rapidly towards top. York tp. James Kirkwood.
3. 7 in long; $2\frac{1}{8}$ wide at mouth; scarcely any taper; $1\frac{1}{4}$ in. thick; hollowed 3 inches, slightly; head broken. Striped slate. Ancaster. William Forbes.
4. $10\frac{1}{2}$ in. long; mouth rounded and $1\frac{3}{8}$ in. wide; width in middle, 2 in., tapering to $\frac{3}{4}$ in. at head; hollowed 8 in. slightly. Edges of hollowed side from top to mouth comparatively straight. Opposite side sharply rounded transversely and much curved lengthwise; greatest thickness being $1\frac{1}{4}$ in., and tapering to $\frac{3}{8}$ in. at head. Granitic. Victoria County.
5. $5\frac{3}{8}$ in long; $1\frac{1}{4}$ in. wide, tapering slightly to head; hollowed, $2\frac{1}{2}$ in.; sides flat; $\frac{3}{8}$ in. thick. Erin Tp. R. McRae.
6. 6 in. long; width at mouth, $1\frac{3}{8}$ in.; at head, $1\frac{1}{4}$ in.; hollowed, $2\frac{3}{8}$ in.; $1\frac{1}{4}$ in. thick. Upper side flat; lower rounded throughout. Granitic. Humberstone Tp. Cyrenius Bearss.
7. $3\frac{7}{8}$ in long; width at mouth, $1\frac{7}{8}$, tapering to rounded top about $\frac{5}{8}$ in. diameter; hollowed, 2 in, slightly. Greatest thickness near head, $\frac{7}{8}$ in. Granitic. Adjala Tp. Mr. Connor, Toronto.
8. $6\frac{1}{4}$ in. long; width at mouth, $1\frac{3}{8}$ in.; at head, $1\frac{1}{2}$ in.; hollowed, 3 in., as in No. 2. Greatest thickness, $1\frac{1}{8}$ in. Compact greenstone. Near Lindsay.

9. 9 in. long; width at mouth, 2 in. No taper. Hollowed, 4 in. Head broken. Upper side flat, lower side rounded throughout. Blue slate. Victoria County. S.

10. $8\frac{3}{4}$ in. long; width at mouth, $1\frac{3}{4}$ in. Lip rounded, tapers to rounded head. Hollowed, 5 in. Greatest thickness, $1\frac{1}{2}$ in. Dark limestone. Chingwacousy Tp.

11. $9\frac{1}{2}$ in. long; width at mouth, $1\frac{3}{4}$ in. Tapers to rounded head. Hollowed 4 in. Sides flat, edges rounded. Greatest thickness, $1\frac{3}{8}$ in. Victoria County. Jas. Dickson.

12. $6\frac{1}{2}$ in. long; width at mouth, $1\frac{7}{8}$. Tapers to $\frac{3}{4}$ in. Hollowed total length, deeply; the edges left along the sides of the groove being only about $\frac{1}{8}$ in. wide. Pilkington Tp.

13. $8\frac{1}{2}$ in. long; width at mouth, $2\frac{1}{4}$ in.; at head, $1\frac{1}{2}$; hollowed, $3\frac{1}{2}$, as in Nos. 2 and 8; greatest thickness, $1\frac{3}{8}$. Buff colored material, resembling lithographic limestone. Near Belleville. S.

14. $7\frac{3}{8}$ in. long; width at mouth, $1\frac{3}{4}$ in.; in the middle nearly 2 in. Tapers very slightly to rounded head. Hollowed, 3 in.; greatest thickness, $1\frac{1}{2}$ in. Much weathered. Granitic. No locality. Y. P. col.

15. 6 in. long; width at mouth, $1\frac{7}{8}$ in. Tapers to 1 in. at flattened head. Hollowed $3\frac{1}{2}$ in. Granitic. Victoria County. Jas. Dickson.

16. $6\frac{1}{2}$ in. long; width at mouth, $1\frac{3}{4}$ in. Tapers to $1\frac{1}{4}$ in. at flattened head. Upper side flat, lower side rounded except near head where it is flat, giving head a triangular look when viewed endwise. Hollowed $3\frac{1}{2}$ in. Greatest thickness, $1\frac{1}{4}$ in. York Tp. Jas. Kirkwood.

17. $7\frac{1}{4}$ in. long, and $2\frac{1}{4}$ wide. Hollowed 3 in., slightly; other portions rounded. Blue slate. York Tp. Jas. Kirkwood.

18. 10 in. long; width at mouth, $2\frac{1}{2}$ in., tapering to 1 in. at head. Hollowed from end to end, deeply; $1\frac{1}{4}$ in. at lip, and $\frac{1}{4}$ in. at head. Greatest thickness, $1\frac{3}{4}$ in. Material like No. 13. Victoria County. S.

19. $4\frac{1}{2}$ in. long; width at mouth, $1\frac{1}{2}$ in., tapering gently to head. Hollowed $2\frac{1}{4}$ inches. Upper side flat, lower rounded. Head a little broken. Greatest thickness, $\frac{7}{8}$ in. Granitic. Pilkington Tp.

20. 14 in. long; width at mouth, $1\frac{3}{4}$ in.; at head, $1\frac{3}{4}$ in.; hollowed, 5 in. Lower side and both edges flat for 4 in. at mouth end, the corners only being rounded to correspond with the groove; all remaining portion rounded. Limestone. No locality. John Hind.

21. 6 in. long; width at mouth, 2 in., tapering to 1 in. at head. Hollowed, 2 in. Thickness, 1 in. Schistose slate. Western Ontario. S.

22. $3\frac{1}{2}$ in. long; width at mouth, 2 in.; at head, $1\frac{1}{4}$. Hollowed slightly from end to end. Granitic. Pickering Tp. G. Welborne.

23. $3\frac{3}{8}$ in. long; width at mouth, $1\frac{3}{8}$, tapers to rough head about 1 in. across. Hollowed slightly, $1\frac{1}{2}$ in. Lower side ridged. Gneiss. Pike's Farm, Wolfe Island.

24. $3\frac{1}{4}$ in. long; width at mouth 1 in., tapers to $\frac{1}{2}$ in. at head. Hollowed deeply the whole length. Greatest thickness, $\frac{1}{2}$ inch. Port Perry. S.

25. $3\frac{1}{4}$ in. long; width at mouth, $1\frac{1}{8}$ in. Hollowed 2 in., as in Nos. 2, 8 and 13. Thickness, $\frac{1}{2}$ in. No locality. S.

26. 5 in. long; width at mouth 2 in. Tapers (with slight depression on each side mid-way) to rounded head $1\frac{1}{4}$ in. Can barely be called a gouge

5 (C.I.)

as the hollow is scarcely $\frac{1}{8}$ in. deep, and extends but a short distance from the lip. Upper side flat, lower round and curved lengthwise. West Middlesex. M.

27. $7\frac{3}{4}$ in. long; width at mouth $2\frac{1}{2}$ in. Tapers with slightly convex sides to rounded head about $1\frac{1}{4}$ in. dia. Hollowed only about $1/16$ in. at lip, and only $\frac{3}{4}$ inch at back. Upper side flat, lower round. Granite. West Middlesex M.

28. $7\frac{3}{4}$ in. long; width at mouth $1\frac{1}{2}$ in. A little wider in middle. Head 1 in. dia. Hollowed slightly, $2\frac{1}{2}$ in. from lip, upper side flat, lower rounded and much curved lengthwise. No locality. Y. P. col.

29. $8\frac{1}{2}$ in. long; width at mouth $1\frac{7}{8}$ in. Tapers to 1 in. Well rounded head. Hollowed $3\frac{1}{4}$ in. deeply. Upper side slightly rounded, lower side very much. Immediately behind groove, but on the under side a transverse groove has been cut for handle attachment. Granite. McGillivray Township. M.

30. $6\frac{1}{4}$ in. long; width at mouth $1\frac{3}{4}$ in. Tapers to $\frac{5}{8}$ in. at rounded head. Hollowed slightly for $2\frac{1}{2}$ in. Upper side flat. Granite. West Middlesex. M.

31. $6\frac{3}{4}$ in. long; width at mouth $1\frac{5}{8}$ in. Sides convex. Head $1\frac{3}{8}$ in. Hollowed slightly $1\frac{1}{2}$ inches from lip. Upper side flat. Granite. West Middlesex. M.

32. 6 in. long; width at mouth $2\frac{3}{8}$ in. Tapers to rounded head 1 inch. Hollowed deeply $2\frac{1}{2}$ in. Upper side flat. Head rounded. McGillivray Township. M.

33. $4\frac{1}{2}$ in. long; width at mouth $1\frac{3}{4}$ in. Tapers to rough head $1\frac{1}{4}$ in. Hollowed from end to end deeply. Serpentine. No locality S.

34. $5\frac{1}{2}$ in. long; width at mouth $1\frac{3}{4}$ in. Tapers rapidly to $\frac{3}{4}$ in. at broken head. Hollowed from end to end deeply. Thickness $1\frac{1}{4}$ in. in middle. Lower side has two sharply cut notches as if for binding to a handle. These are $\frac{5}{8}$ in. apart, the lower one being $3\frac{1}{2}$ in. from lip. They extend only half way round. Brookfield, Mo. Dr. Rear, Toronto.

35. 4 in. long; width at mouth $1\frac{3}{8}$ in. Tapers to $\frac{1}{2}$ in. at smoothly rounded head. Hollowed from end to end. 1 in. thick. Addington County. Dr. T. W. Beeman, Perth. (O. L.)

36. $5\frac{1}{2}$ in. long; width at mouth $1\frac{1}{2}$ in. expanding for remainder of length to $1\frac{1}{8}$ in. Hollowed $2\frac{1}{2}$ in. Thickness $\frac{1}{2}$ in. Head rough. Lanark County Dr. T. W. Beeman, Perth. (O. L.)

37. $6\frac{1}{4}$ in. long; width of mouth (which is rounded) $1\frac{7}{8}$ in. Hollowed very slightly nearly the full length. West Middlesex. M.

38. $5\frac{5}{8}$ in. long; width of mouth $1\frac{5}{8}$ in., expands slightly and tapers to $1\frac{1}{2}$ in. at head. Hollowed $2\frac{5}{8}$ in. Upper and lower sides flat, with corners chamfered. Thickness 1 in. Argillite. Humberstone Tp. Gustav Utz.

39. $8\frac{1}{2}$ in. long; width at mouth $1\frac{1}{2}$ in., enlarges behind to $1\frac{7}{8}$ in. Tapers to rough head 1 in. Hollowed $3\frac{1}{2}$ in. Sherbrooke Tp. Dr. T. W. Beeman, Perth. (O. L.)

CASE L.

STONE PIPES.

1. Nottawasaga Tp. Lougheed col.
2. Nottawasaga Tp. Wm. Smith, Toronto.
3. Nottawasaga Tp. Herbert Connor.

4. Orillia. S. G. Plunkett, Toronto.
5. Albion Tp. S.
6. Eglinton, York Tp. Y. P. col.
7. Eglinton, York Tp. Y. P. col.
8. Sault Ste Marie. Y. P. col.
9. Eglinton, York Tp. Y. P. col.
10. Eglinton, York Tp. Y. P. col.
11. Eglinton, York Tp. Y. P. col.
12. Eglinton, Y. Tp. York P. col.
13. Victoria Co. S.
14. Nottawasaga Tp. Lougheed col.
15. Nottawasaga Tp. Lougheed col.
16. Kent Co. Y. P. col.
17. Nottawasaga Tp. Lougheed col.
18. Probably modern North-west. Y. P. col.
19. Newmarket. Stew. col.
20. Burlington Beach. Y. P. col.
21. Nottawasaga Tp. Lougheed col.
22. Nottawasaga. Lougheed col.
23. Forest. S.
24. Near Milton. Finlay McCallum.
25. Victoria Co. Dickson col.
26. Modern North-West. Y. P. col.
27. Markham. S.
28. Nottawasaga Tp. Catlinite. Ed. Beecroft.
29. Modern Northwest. Catlinite. Y. P. col.
30. Victoria Co. Dickson col.
31. Beverly Tp. A. McKnight.
32. Nottawasaga Tp. Lougheed col.
33. York Tp. Y. P. col.
34. Nottawasaga Tp. Lougheed col.
35. Tremont Park, Tidd's Island. C. A. See.
36. Plympton. S.
37. Nottawasaga Tp. Lougheed col.
38. Pembina. Manitoba. S.
39. Nottawasaga Tp. Ed. Coyle.
40. Kincardine. M.
41. Ste. Marie, Simcoe Co.
42. Stem catlinite modern North-west. York P. col.
43. West William Tp. M.
44. Wiarton. M.

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45. Nottawasaga Tp. Dugald Currie.
 46. London Tp. M.
 47. Wiarton. M.
 48. Nottawasaga Tp. Lougheed col.
 49. York Tp. Y. P. col.
 50. Lake Moira, near Madoc. Mr. Moon.
 51. Richmond Hill. Alex. and Arthur Boyle.
 52. Miami valley. C. J. B. Ratjen, Lawrenceburg, Ind.
 53. York Co. Y. P. col.
 54. Simcoe Town. S.
 55. Boone Co., Kentucky U. S.
 56. Pittsburg Tp. Frontenac Co. W. G. Kidd, Kingston,
 57. Nottawasaga Tp. Mr. Duff.
 58. Nottawasaga Tp. Herbert Connor.
 59. London Tp. M.
 60. Grand Bend, Sable River. M.
 61. McGillivray Tp. M.
 62. Bay of Quinte, (pewter or lead). Dr. T. W. Beeman (O. L.)
 63. Qu'Appelle R. Valley, N. W. T. Jas. C. Stokes.
 64. Dakota, U. S. (catlinite) Dr. Rear.
 65. Eglinton, Y. Tp. Y. P. col.
 66. Lake McGail, ("white stone.") Y. P. col.
 67. Burlington Beach. Y. P. col.
 68. Pacific Coast, Brit. Columbia. Y. P. col.
 69. Blood Indian (modern) Rev. John McLean.
 70. Modern. " "

CASE M.

MAINLY OF SLATE.

Bird Amulets.

1. $5\frac{3}{4}$ in. long and $\frac{3}{4}$ in. across middle of base, neck $2\frac{1}{8}$ in. long and only $\frac{3}{8}$ in. (at crown of head) above level of back. The attempt to represent a head is very simple, the neck being sloped off at about 47° a slight downward curve on the under side adding to beak appearance. Tail at widest part $1\frac{1}{8}$ in. erected at angle and stands $\frac{3}{8}$ in. higher than back, length of base 3 in., slightly hollowed lengthwise and a little rounded transversely. Aurora, York Co. S.

2. $3\frac{1}{4}$ in. long and $\frac{5}{8}$ in. across middle of base, which is 2 in. long, neck erect, crown of head $1\frac{1}{4}$ in. above base, head $1\frac{1}{8}$ in. long, beak from $\frac{5}{8}$ in. deep in front

of eyes, to $\frac{1}{4}$ at end. Peduncled eyes, only part of one now left, tail erect and $1\frac{3}{8}$ inches long from base. Base very slightly hollowed lengthwise, otherwise flat. No locality. S.

3. 3 in. long, head and tail erected at about 45° ; from crown to tip of beak 1 in. Peduncled eyes $\frac{3}{4}$ in. in diameter the upper portion of them rising $\frac{1}{4}$ in. above crown of head. Bar across base at each end and projecting about $3/16$ below base. Thorndale, Perth Co. S.

4. $3\frac{3}{8}$ in. long, neck erect, sharp curve forming crown of head and continuation of curve forming beak. Lower curve more circular, width of head from crown to neck 1 in. Base $1\frac{7}{8}$ in. long, $\frac{1}{2}$ in. wide and convex both ways. S.

5. $4\frac{1}{2}$ in. long, neck erect, crown of head $1\frac{1}{8}$ in. above base. Head formed as in No. 4. No tail. The original hole through rear end having been broken out, a new one has been bored coming out on the top. Base $2\frac{3}{4}$ in. long and $\frac{3}{4}$ wide, slightly convex in both directions. York Tp. (?)

[This handsome specimen was presented to the museum about three years ago. It was handed in by the gentleman who owned it, but unfortunately the record of its reception has been lost. Should the owner recognize it by the above description, or by seeing it in the case, he will confer a favor by addressing the curator.]

6. 3 5-16 in. long, the outline is similar to that of No. 4. Base $1\frac{3}{4}$ in. long and $\frac{5}{8}$ in. wide; convex in both directions. S.

7. $4\frac{5}{8}$ in. long. Head and tail on line with back, except for slight depressions to form neck and flatten tail. Base $1\frac{5}{8}$ in. long with heavy transverse bar at each end. From front bar to tip of beak is $1\frac{7}{8}$ in. and from rear bar to end of tail $1\frac{3}{8}$ in. The tail is $1\frac{5}{8}$ in. wide. At the shoulders the specimen is $1\frac{1}{4}$ in. wide whence it narrows rapidly to tip of beak. Brantford. S.

8. 3 5/16 in. long, neck and head raised a little, tail depressed and pointed. Base 2 in. long, $1\frac{5}{8}$ in. wide and barred. It is quite impossible to write an intelligible description of this singular specimen. The eyes project but have no disc. They stand out 3-16 in. from the head and terminate in a rounded end, less than $\frac{1}{8}$ in. diameter. The material is huronite. Port Rowan. S.

9. $4\frac{3}{8}$ in. long, neck and tail almost at right angles to body. Base $2\frac{1}{4}$ in. long and $\frac{5}{8}$ in. wide. Tail $1\frac{3}{8}$ wide and $1\frac{5}{8}$ in. from base to end. The head from crown to point of beak is 2 in. and is at right angle to neck, tapering from $\frac{1}{2}$ in. to $3/16$. Biddulph Tp., Middlesex. M.

10. $5\frac{3}{4}$ in. long, neck and tail erect and rising $\frac{1}{2}$ in. above back. Breast forms nearly a right angle with base. Tail more oblique with a central rib in continuation of sharp ridge forming the whole upper outline. Head from breast to point of back $2\frac{1}{4}$ in. Tail from base $1\frac{1}{8}$ in. Base 3 in. long and $\frac{5}{8}$ in. wide, concave lengthwise and concave across. Brown and purple veined argillite. London Tp., Middlesex Co. M.

11. $5\frac{1}{2}$ in. long, neck rises high. Crown of head $2\frac{3}{8}$ in. above base. Head from curve of throat to point of beak 1 in. long. Tail from base $1\frac{3}{8}$ in. and same width as body. Base $3\frac{1}{8}$ in. long and $13/16$ in. wide, slightly convex in both directions. McGillivray Tp., Middlesex Co. M.

12. $3\frac{5}{8}$ in. long, head above base $1\frac{3}{8}$ in. Tail above base 1 in. and ribbed. Base $2\frac{1}{2}$ in. long and $9/16$ in. wide, convex in both directions. Stephen Tp., Middlesex Co. M.

13. $4\frac{1}{4}$ in. long. Head rises $1\frac{5}{8}$ in. above base. Tail broken. Base $2\frac{1}{4}$ in. long and $13/16$ in. wide, convex and twisted a little lengthwise—slightly convex across. West Williams, Middlesex Co. M.

14. $5\frac{1}{8}$ in. long. Head and neck almost on level with back, the two measuring $1\frac{1}{2}$ in. from shoulder. Tail rises $1\frac{3}{8}$ in. above base and of same width as body. Base $3\frac{1}{4}$ in. long and 1 in. wide. Front hole in base broken and no hole at rear angle. Base slightly convex both ways. McGillivray Tp., Middlesex Co. M.
15. $3\frac{3}{4}$ in. long, broken off at tail end. Form of head similar to Nos. 5 and 6. Pale pink granite. City of London, Middlesex Co. M.
16. This specimen is in many respects of the same unusual type as No. 8, but its condition is less perfect, both head and tail being damaged. The head fracture has been rubbed down pretty smoothly and the angularities of the tail fracture have been rounded off. All that remains of the left eye indicates pedunculation but the disc is broken off. The body oval in outline, being 2 in. long and $1\frac{1}{2}$ in. wide. The thickness of the body from upper to lower side is only about half an inch. The material is the striped slate of which so many are made. East Williams, Middlesex Co. M.
- 16 $\frac{1}{2}$. $3\frac{3}{4}$ in. long. Neck elevated, head horizontal, eyes peduncled; one broken; tail almost horizontal and depressed marginally near body. Base $1\frac{3}{8}$ in. long $1\frac{3}{8}$ in. wide and barred. McGillivray Tp., Middlesex Co. M.
17. $2\frac{1}{8}$ in. long. Neck almost at right angles to body, head horizontal and crown $1\frac{3}{4}$ in. above base. Head from centre of crown $\frac{7}{8}$ in. and from throat $\frac{5}{8}$ in. long. Eyes peduncled, discs about $\frac{7}{16}$ in. diameter. Tail rises only a little above horizontal. Base $1\frac{3}{4}$ in. long, $1\frac{1}{16}$ in. wide and barred. This specimen seems to be in an unfinished condition as the holes have not been bored through the bars. The two extremities of the front hole have merely been marked. Huronite. West Williams Tp., Middlesex Co. M.
18. $6\frac{1}{4}$ in. long. Neck rises with a gentle curve, beginning within 1 in. of tail. Height of crown from base $1\frac{1}{2}$ in. Head $1\frac{1}{4}$ in. long, points downwards at angle corresponding to rise of neck, it is $\frac{9}{16}$ in. wide, about $\frac{3}{16}$ in. thick, square pointed and edge up. Eyes peduncled and projecting about $\frac{3}{8}$ in., discs about $\frac{1}{2}$ in. diameter. Base $3\frac{1}{2}$ in. long and varying in width from $\frac{9}{16}$ in. in front to $\frac{7}{8}$ in. behind. Tail rises at sharp angle $1\frac{1}{4}$ in. above base and is $\frac{7}{8}$ in. wide. This specimen is perfect in every respect and is admirably made. West Williams Tp. M.
19. $2\frac{1}{4}$ in. long. Crown of head same height as tail. Tail erect almost at right angle. Base $1\frac{3}{8}$ in. long, and $\frac{3}{4}$ in. wide. Convex both ways. W. Muma, Humberstone Tp.
20. $2\frac{7}{8}$ in. long. Neck in line with back and head pointing downwards. Crown surmounted with oval projection 7-16 in. long and 3-16 wide. Tail only a slight upward curve of back line about $\frac{1}{8}$ in. high. Base $1\frac{1}{2}$ in. long and $\frac{5}{8}$ in. wide, convex in both directions.
21. Tail fragment. McGillivray Tp. M.
22. Head and neck of bird-amulet. Peduncled eyes. One broken off. Upper edge of whole piece notched. A hole has been drilled through the neck end for secondary rise. S.
- Unless where otherwise noted, all these are of striped slate, and are bored diagonally on each end at the under side.
25. $2\frac{3}{8}$ in. long, $1\frac{7}{16}$ in. wide, and $\frac{7}{8}$ in. thick in middle, decreasing at end to $\frac{1}{4}$ in. thick. Hole bored edgewise and oval, the longer diameter being on one side $\frac{3}{4}$ in., and on the other $\frac{5}{8}$ in. The specimen is hammer shaped, but shows no signs of use on ends. All the edges are square. Slate, faintly striped. Ontario. S.

26. $3\frac{1}{8}$ in. long, $1\frac{1}{8}$ in. wide, and $\frac{7}{8}$ in. thick. Ovate sidewise and edgewise. Bored One end broken. S.

27. $2\frac{3}{8}$ in. long, 1 in. wide and 1 in. deep. Port Rowan. S.

28. 2 in. long, $1\frac{11}{16}$ in. wide and 1 in. thick. Oval; flattened at each end. Hole $\frac{7}{16}$ in. diameter at one end, and $\frac{3}{8}$ at the other, bored lengthwise. Edges of specimen rounded, and one of them bearing nineteen notches crosswise, from $\frac{1}{8}$ to $\frac{1}{4}$ in. long. Striped slate. Western Ontario. S.

29. $1\frac{7}{8}$ in. diameter, and $1\frac{1}{2}$ in. thick, viewed from side it is perfectly circular. A hole $\frac{3}{8}$ in. in diameter is bored through the longer axis. On one side and parallel with the hole a hollow has been formed, the greatest width of which is fully one inch. Striped slate. West Williams Tp. M.

30. $6\frac{3}{8}$ in. long, $1\frac{1}{2}$ in. wide, and $1\frac{1}{2}$ in. thick in middle, ending in a blunt point at the extremities. All the sides are rounded smoothly, and a $\frac{7}{16}$ in. hole is bored through greater diameter of middle. Striped slate, brown. Wingham. S. (Perfectly symmetrical in every respect.)

31. $4\frac{3}{8}$ in. long, $1\frac{1}{8}$ in. wide, and $\frac{7}{8}$ in. thick. Finely rounded on all sides, and pointed at each end. A $\frac{3}{8}$ in. hole bored through middle. This specimen is similar in shape to No. 30, but one side is less curved than the opposite. Striped slate. Norfolk Co.

32. $3\frac{3}{8}$ in. long, $1\frac{1}{4}$ in. wide, and $\frac{7}{8}$ in. thick, tapering to point at each end. Hole $\frac{1}{4}$ in. diameter, bored through shorter diameter of middle. Brown striped and mottled slate. Caradoc Township. M.

Winged and Horned Specimens.

33. 5 in. long across tips of curved horns which are knobbed at ends, $1\frac{1}{8}$ in. deep in middle through which a $\frac{3}{8}$ in. hole is bored. Not quite symmetrical. Slate; weathered. Plympton Tp. S.

34. $6\frac{3}{4}$ in. from tip to tip of horns, which are terminated in handsome oval knobs. Depth in middle $1\frac{3}{8}$ in. Hole $\frac{7}{16}$ in. diameter. Same type as No. 33, but smoothly finished and perfect in symmetry. Zone Tp. S.

35. $5\frac{3}{8}$ in. from tip to tip of wings, which are flattened in line with the hole, nearly $\frac{7}{16}$ in. in diameter in middle, which is $\frac{7}{8}$ in. deep. The wings are curved to one side $\frac{3}{8}$ in. beyond the centre, and on the opposite side are two projections, each about $\frac{1}{8}$ in. from centre of hole, and extending fully the same distance beyond the body in the centre. One wing is a little longer and more pointed than the other. Light gray slate. Lake shore, Norfolk Co. S.

36. $6\frac{1}{8}$ in. across horns, which terminate in oval knobs sharply ridged on outer surface. Depth in middle $1\frac{1}{8}$ in. Dark striped slate. Specimen closely resembles No. 34, but has been broken across the hole and cemented. Highly finished. Forest. S.

37. $5\frac{7}{8}$ in. across wings, which are flattened in line with hole through the middle, which is $1\frac{3}{8}$ in. deep. The wings are about $1\frac{3}{4}$ in. wide at the broadest part, and not more than $\frac{3}{8}$ in. thick where they join the central portion, which is flat sided and rises with sharply marked shoulders above the sides of the wings. The thickness of the central portion is less than an inch, and the hole is $\frac{3}{8}$ in. in diameter on one side, and slightly less on the other. Brown argillite. Wingham. S.

38. $3\frac{1}{2}$ in. long, and $2\frac{1}{2}$ in. wide, irregularly quadrangular. Wings full breadth —ends have been broken off and rubbed down again. This has been effected by

some one recently, as the rubbing has been done to produce a sharp edge. A squarely cut notch $\frac{1}{2}$ in. deep and the same width is made on one side where the hole comes out. Hole $\frac{3}{8}$ in. diameter at this end, and $\frac{1}{2}$ in. diameter at the other. Striped slate. Port Perry. S.

39. $3\frac{1}{4}$ in. long, and 3 in. wide. One wing much damaged. Notched in middle at extremities of hole, which is about $\frac{3}{8}$ in. diameter. One notch $\frac{3}{4}$ in. deep, and one 1 in. deep. Specimen has been broken across hole and cemented. Slate. S.

40. $4\frac{1}{4}$ by $4\frac{1}{4}$ in. Each wing forms half of a six sided figure. Notches in middle between wings $1\frac{1}{2}$ inch deep. The hole has been bored through the entire width before the notches were made. Has been broken and cemented. One side of eye lost. One side of each wing injured. Wings less than $\frac{1}{4}$ in. thick. Brown slate. Y. P. col.

41. $4\frac{1}{2}$ in. long, and $3\frac{3}{16}$ in. wide. Outline approximately oval. Hole $\frac{5}{8}$ in. diameter. One notch $\frac{3}{8}$ in. deep, and one $\frac{5}{8}$ in. deep. Notches made after boring. Wings near middle about $\frac{1}{2}$ in. thick. Striped slate. Blanshard Township. M.

50. $3\frac{7}{8}$ in. long, $3\frac{1}{2}$ in. wide. Has been almost circular in outline when perfect. One wing broken. Notches between wings about $\frac{5}{8}$ in. deep, and as they are $\frac{5}{8}$ in. wide, the hole being only $\frac{3}{8}$ in. diameter, it is not possible to tell whether they were made before or after the boring. Striped slate. Mound in Perry Co., Ohio.

43. $4\frac{5}{8}$ inch long, and $2\frac{1}{2}$ in. wide. Approximately oval in outline. Wings $\frac{3}{8}$ in. thick near middle. No notches. Hole $\frac{7}{16}$ in. diameter at one side, and a little over $\frac{5}{16}$ at the other. Striped slate. McGillivray Tp. M.

44. $5\frac{1}{4}$ in. long, and $1\frac{7}{8}$ in. wide. Outline a long oval, somewhat pointed at the ends. Hole $\frac{3}{8}$ in. diameter. One side weathered. Brown striped slate tinged with blue. East Williams Tp. M.

45. $3\frac{1}{2}$ in. long, and $2\frac{1}{8}$ in. wide. Outline oval. Hole $\frac{3}{16}$ in. diameter. Notches $\frac{5}{8}$ in. deep and made after boring. At point of one wing a circular depression $\frac{7}{16}$ in. long and $\frac{1}{2}$ in. deep has been made. McGillivray Tp. M.

46. $3\frac{3}{8}$ in. long, and $1\frac{5}{8}$ in. wide. Hole $\frac{5}{16}$ in. diameter. Two half round depressions less than $\frac{1}{4}$ in. deep take the place of notches. Wings thick in proportion to size. Ends chipped as if used for hammering. Dark striped slate. McGillivray Tp. M.

47. $4\frac{1}{2}$ in. long, and $1\frac{1}{2}$ in. wide. Butterfly outline. Hole on more rounded side $\frac{1}{2}$ in. diameter; on the other under $\frac{3}{8}$ in. diameter. Striped slate. East Williams Tp.

48. $5\frac{1}{4}$ in. long, and $2\frac{1}{4}$ in. wide. Outline a pointed oval. Hole $\frac{3}{8}$ in. diameter at one end, and $\frac{1}{2}$ in. nearly at the other. No notches. Striped slate. West Williams Tp. M.

49. $4\frac{5}{8}$ in. long, and 3 in. wide. One wing is nearly an inch shorter than the other, and has been re-worked. Hole $\frac{3}{8}$ in. diameter. Only one side notched $1\frac{3}{8}$ in. deep. Striped slate. Biddulph Tp. M.

51. $2\frac{1}{4}$ in. long, and $1\frac{3}{8}$ in. wide. Wings triangular. Point of one broken. Hole about $\frac{3}{8}$ in. diameter, and walls very thin. Notches $\frac{5}{8}$ in. deep. A sharp ridge rises on the sides of the hole, and in line with it, making diameter across centre $\frac{7}{8}$ in. This is the smallest specimen of its kind in the collection. Striped slate. Vaughan Tp. Dr. Orr, Maple.

52. In outline like a pipe, but the hole (which is oval) pierces the "head" in line with the "stem." Upper edge of what may be called stem slightly grooved in continuation of curve made by lower side of hole. Stem $2\frac{1}{2}$ in. long. Upper side $\frac{5}{8}$ in. wide at angle and tapering to $\frac{1}{2}$ in. at point. Lower side brought to a rounded edge. Head $2\frac{1}{2}$ in. deep, $\frac{3}{4}$ in. thick, and $1\frac{1}{4}$ in. wide in direction of stem. Hole 11-16 by 5-16 in. diameter. Brown striped slate. No locality. S.

55. Fragment of a peculiar specimen, having apparently had two large and two small incurved wings. S.

56. Fragment of horned specimen. The horn rises in a curve almost in line with the hole. Simcoe Town. S.

57. One half of specimen like No. 50. Caradoc Tp. M.

59. One half of specimen similar to No. 57. M.

Tubes.

62. $3\frac{1}{2} \times 1\frac{3}{8} \times 1$ in. Striped slate. Forest. S.

63. $2\frac{7}{8} \times 1\frac{1}{4} \times 1$ in. Striped slate. Norfolk Co. S.

64. $2\frac{5}{8} \times 1\frac{3}{4} \times 1\frac{1}{8}$ in. Slate. Norfolk. S.

65. $5\frac{1}{4}$ in. long, and $1\frac{3}{8}$ in. diameter, perfectly round. Hole $\frac{3}{4}$ in. dia. This is a fragment of what is said to have been a tube at one time upwards of a foot in length. The material appears to be a fine close-grained limestone, resembling somewhat German lithographic stone, but darker. It takes a good polish. Mr. Galbraith, the gentleman who handed it in, said he remembered seeing it when whole. Unfortunately the record of its locality has been lost. Perhaps this notice will meet the gentleman's eye.

66. $6\frac{3}{4} \times 1\frac{1}{2} \times 1$ 1-16 in. Hole $\frac{3}{8}$ in diameter at one end and 5-16 at the other. Sides rounded. Cross section oval. Slate. Beverly Township. Miss Jessie Robertson, Valens.

67. $7\frac{1}{8}$ in. long. Almost round and tapering slightly from $\frac{7}{8}$ in. to $\frac{3}{4}$ in. diameter. Hole $\frac{1}{2}$ in. diameter at larger end, and $\frac{3}{8}$ at the other. Slate. S.

68. 4 in. long, and $1\frac{1}{8}$ in. dia. at larger end, tapering to an oval of 1 in. \times 13-16 in. at the other end. Hole is flared at large end to nearly full dia. of tube. At small end it is also somewhat enlarged, being $\frac{1}{2}$ in. dia. at the tip, and barely $\frac{3}{8}$ in., half an inch in. The material is much like that of No. 65, but lighter in color. Wolfe Island.

69. $8\frac{1}{2}$ in. long, $1\frac{1}{8}$ in. dia. Almost perfectly round. One end slightly larger than main body, measuring nearly $1\frac{1}{4}$ in. Hole as in No. 68. Material similar, but darker in color, darker even than No. 65.

70. $3\frac{3}{4}$ in. long, $\frac{3}{4}$ in. dia. Broken. Slate. West Williams Tp. M.

71. $4\frac{1}{2}$ in. long, 1 in. \times $1\frac{3}{8}$ in. dia. in middle. Sides rounded and tapering with convexity to about $\frac{5}{8}$ in. dia. at smaller end which is broken. Hole decreases from $\frac{3}{8}$ to $\frac{3}{16}$ in. Striped slate. McGillivray Tp. M.

72. 5 in. long, and $\frac{3}{4}$ in. dia. Two sides flattened and two rounded. Striped slate. McGillivray Tp. M.

73. 4 in. long, and $1\frac{1}{2}$ in. wide. Longitudinal fragment; shows side of hole. McGillivray Tp. M.

Bar Amulets.

20. $3\frac{3}{8}$ in. long, $1\frac{1}{4}$ in. wide, and $1\frac{1}{4}$ deep. Cross section triangular. Bosanquet Tp. M.
21. $3\frac{1}{2}$ in long. Base $\frac{9}{16}$ in. wide, depth $\frac{1}{8}$ in. Boring of holes at each end incomplete. Scotland Village. S.
22. 3 in. long. Base nearly $\frac{3}{4}$ in. wide. Depth $\frac{7}{8}$ in. Both ends fractured on upper side. St. Mary's. S.
23. $3\frac{3}{4}$ in. long, nearly $1\frac{1}{2}$ in. wide, and $\frac{3}{4}$ in. deep. Cross section semi-circular. West Williams Tp. M.
53. 3 in. long, $\frac{3}{4}$ in. wide, and $\frac{7}{8}$ in. deep. Higher in middle than at ends; ends collared. No locality. Y. P. col.
24. $4\frac{3}{4}$ in. long, $\frac{3}{4}$ in. wide at ends, less in middle. $\frac{1}{2}$ in. deep. McGillivray Tp. M.
74. $4\frac{5}{8}$ in. long. Greatest dia. $1\frac{1}{8}$ in. Hole $\frac{3}{4}$ in. dia., bored $1\frac{3}{8}$ deep as if intended for a tube. Smaller end only about 1 in. diameter. Striped slate. West Williams Tp. M.
75. $4\frac{5}{8}$ in. long, $1\frac{3}{8}$ in. wide, and 1 in. thick. Sides rounded. Smaller at each end than in the middle. Striped slate. London Tp. M.
76. $3\frac{1}{4}$ in. long, and about $\frac{5}{8}$ in. dia. Broken at each end, Sides slightly rounded. Hole shows longitudinal markings deeply cut. Striped slate. Blanshard Tp. M.
77. $3\frac{3}{4}$ in. long, $1\frac{3}{8}$ in. wide. One side splintered but leaving hole intact. Sides rounded. Striped slate. Biddulph Tp. M.
84. Fragment of object like No. 52. This specimen is less in size than No. 52. but has been much more handsomely made. Striped slate. Biddulph Tp. M.
85. $6\frac{1}{4}$ in. long, fully 1 in. wide, and $\frac{3}{4}$ in. thick. Viewed from the edge it tapers to a point at each end. Viewed from the side the two edges are almost parallel. The ends are slightly hollowed, but the sides are perfectly flat. A $\frac{3}{8}$ in. hole pierces it edgewise in the middle. Under side weathered, but on the whole a beautiful specimen. Western Ontario. S.
86. Similar in almost every particular to No. 85, except that the ends are more deeply hollowed. Perth Co. P. R. Jarvis.

CASE N.

GORGETS OR TABLETS—TWO OR MORE HOLES.

The specimens in cases N and O are, almost without exception, made from slate. They vary very much both in size and shape. They appear to be considerably more plentiful in the western than in the eastern portion of the province. In many instances it is easy to believe that these were worn as gorgets or breast-plates, but in other specimens, especially some of those in case N, the number and position of the holes would seem to indicate a different use. One tablet has had as many as seven holes bored through it, some of them close to the edges and now partly broken off, others near the middle, and all apparently without any regularity.

1. St. Thomas. S.
2. Fingal. S.
3. No record. S.
4. Sarnia Tp. S.
5. Galt. S.
6. Orillia. S.
7. No record. S.
8. Caradoc Tp. S.
9. Near Stratford. S.
10. No record. York P. col.
11. St. Mary's. S.
12. No record. S.
13. Near Norwich. S.
14. Exeter. S.
15. London Tp. S.
16. Pilkington Tp.
17. Plympton Tp. S.
18. No record. S.
19. Eramosa Tp.
20. Owen Sound. S.
21. No record. S.
22. No record. S.
23. No record. S.
24. No record. S.
25. West Williams Tp. M.
26. McGillivray Tp. M.
27. McGillivray Tp. M.
28. West Williams Tp. M.
29. Thedford Tp. M.
30. West Williams Tp. M.
31. McGillivray Tp. M.
32. West Williams Tp. M.
33. West Williams Tp. M.
34. McGillivray Tp. M.
35. West Williams Tp. M.
36. West Williams Tp. M.
37. McGillivray Tp. M.
38. West Williams Tp. M.
39. McGillivray Tp. M.
40. Caradoc Tp. M.
41. Biddulph Tp. M.

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42. Middlesex Co. M.
 43. McGillivray Tp. M.
 44. Biddulph Tp. M.
 45. East Williams Tp. M.
 46. Biddulph Tp. M.
 47. West Williams Tp. M.
 48. West Williams Tp. M.
 49. McGillivray Tp. M.
 50. Middlesex Co. M.
 51. McGillivray Tp. M.
 52. Near Lindsay. S.
 53. Near Lindsay. S.
 54. St. Thomas. S.
 55. McGillivray Tp. M.
 56. Hamilton Co. O., W. K. Moorehead.
 57. Stephen Tp. M.
 58. No record. S.
 59. No record. S.
 60. No record. S.
 61. No record. Y. P. col.
 62. Wolfe Island, R. St. Lawrence.
 63. Biddulph Tp. M.
 64. No record.
 65. Miami Valley, O., C. J. B. Ratjen.
 66. Miami Valley, O., C. J. B. Ratjen.
 67. Miami Valley, O., C. J. B. Ratjen.
 68. Miami Valley, O., C. J. B. Ratjen.
 69. Lee Co. Va., Ky., Geol. Sur., Frankfort.

CASE O.

GORGETS OR TABLETS—ONE HOLE.

1. Western Ontario. S.
2. Western Ontario. Notched at one end. S.
3. Inly City, Mich., U. S. S.
4. Western Ontario. S.
5. Jarvis, Norfolk Co. S.
6. Western Ontario. S.
7. Western Ontario. S.
8. Tremont Park, Tidd's Island. C. A. See.

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9. Tremont Park, Tidd's Island. C. A. See,
 10. Near Cobourg. S.
 11. Western Ontario. S.
 12. Moore Tp. S.
 13. Exeter. S.
 14. Near Galt. S.
 15. Western Ontario. S.
 16. Guelph Tp.
 17. York Tp. Y. P. col.
 18. Western Ontario. S.
 19. Western Ontario. S.
 20. No record. Y. P. col.
 21. Western Ontario. S.
 22. Forest. S.
 23. Western Ontario. S.
 24. McGillivray Tp. M.
 25. Biddulph Tp. M.
 26. McGillivray Tp. M.
 27. London City. M.
 28. West Williams. M.
 29. West Williams. M.
 30. McGillivray Tp. M.
 31. Biddulph Tp. M.
 32. Caradoc Tp. M.
 33. McGillivray Tp. M.
 34. Bosanquet Tp. M.
 35. West Williams Tp. M.
 36. West Williams Tp. M.
 37. Middlesex Co. M.
 38. McGillivray Tp. M.
 39. McGillivray Tp. M.
 40. McGillivray Tp. M.
 41. McGillivray Tp. M.
 42. Biddulph Tp. M.
 43. McGillivray Tp. M.
 44. Caradoc Tp. M.
 45. Blanshard Tp. M.
 46. West Williams Tp. M.
 47. McGillivray Tp. M.
 48. Biddulph Tp. M.
 49. Stephen Tp. M.

50. West Williams Tp. M.
51. Humberstone Tp. Wilson.
52. Weston, Ontario. S.
53. Weston, Ontario. S.
54. Weston, Ontario. S.
55. Tremont Park, Tidd's Island. C. A. See.
56. Tremont Park, Tidd's Island. C. A. See.
57. Weston, Ontario. S.
58. Wolfe Island.
59. Wolfe Island.
60. Victoria Co. Dickson col.
61. Wolfe Island.
62. McGillivray Tp. M.
63. No record.
64. Caradoc Tp. M.
65. Nottawasaga. Lougheed col.
66. Miami Valley. Dr. Craig, Lawrenceburg, Ind.

CASE P.

COPPER AND HEMATITE.

Hematites.

1. $2\frac{1}{4} \times 1\frac{1}{2}$. Hartford city, Mason Co., West Virginia. W. K. Moorehead.
2. $3\frac{1}{2} \times 2\frac{1}{2}$. Locust Creek, Linn Co., Mo. Dr. Rear, Toronto.
3. $2\frac{5}{8} \times 1\frac{5}{8}$. Brookfield, Mo. Dr. Rear.
4. Brookfield, Mo. Dr. Rear.
5. Linn Co., Mo. Dr. Rear.
6. Sinkers or plummet $1\frac{1}{4} \times \frac{5}{8}$ in. Near Columbus, O., C. D. Pettibone, Cincinnati, O.

Native Copper.

1. Chisel with socket for handles. Total length $4\frac{3}{8}$ in. Width at lip $1\frac{1}{4}$ in. Manitoulin Island. Mr. Yellowlees.
2. Axe $4\frac{1}{2}$ in. long, $2\frac{1}{4}$ in. wide at lip, and tapering to $1\frac{1}{2}$ in. at head. Greatest thickness about $\frac{3}{8}$ in. Brantford. S.
3. Axe or chisel 4 in. long, $2\frac{3}{4}$ in. wide at lip, and tapering to $\frac{5}{8}$ in. at head. Greatest thickness $\frac{5}{16}$ in. Tremont Park, Tidd's Island, Gananoque. C. A. See.
3. Axe or chisel, 6 in. long, $1\frac{1}{4}$ in. wide at lip, and tapering with convex sides to $\frac{3}{8}$ in. at head. Greatest thickness $\frac{1}{4}$ in. Beverly. J. Humphrey, Troy.
5. Spear-head $6\frac{1}{2}$ in. long, 1 in. at widest, and about $\frac{5}{16}$ in. thick in middle. Has tine for insertion in handle.

6. Spear-head, $7\frac{1}{2}$ in. long, and $1\frac{1}{8}$ in. at widest, with tine 2 in. long. Greatest thickness of blade $\frac{3}{16}$ in. Brantford. S.

7. Spear-head, or knife, 4 in. long. Widest part of blade $1\frac{1}{16}$ in. Greatest thickness $\frac{1}{8}$ in. Has a neck for attachment to handle. Neck $\frac{1}{2}$ in. long with a projection at each lower angle to aid in holding place in shaft. Rice Lake. S.

8. Spear-head with socket. Total length $5\frac{1}{4}$ in. Blade 3 in. long, $\frac{7}{8}$ in. at widest part. and $\frac{1}{8}$ in. thick. Near Toronto. S.

9. Spear-head or knife $5\frac{5}{8}$ in. long with tine. Greatest width of blade $\frac{7}{8}$ in. and about $\frac{1}{8}$ in. thick. No locality. S.

10. Fragment of knife, $2\frac{3}{4}$ in. long. No locality. S.

11. Knife with tine. Total length $3\frac{3}{8}$ in. Blade 2 in. long and 1 in. wide—thinned on one edge only. No locality. S.

12. Knife with tine. Total length $7\frac{3}{8}$ in. Blade $5\frac{1}{4}$ in. long. Greatest width $1\frac{3}{16}$ in., and although thinned on both edges, has only one made to cut. The cutting edge is convex as the result of the greater thinning, and the back is correspondingly hollow. The shape of this knife is suggestive of a European model. Beverly. James Rae.

13. Bracelet, 2 in. dia., and from $\frac{1}{8}$ in. to $\frac{3}{16}$ in. thick. Cross section a flattened oval, the longer dia. being in the plane of the circle. Rice Lake. S.

14. Bracelet and fragment; sheet copper coiled in tubular form and bent. No locality. Y. P. col.

15. Spear-head with tine. Total length $5\frac{5}{8}$ in. Blade 4 in. long, 1 in. at widest, $\frac{1}{8}$ in. thick, and smoothly finished to double edges. Tine round. London Tp. M.

16. Spear-head with small socket. Total length 9 in. Blade $7\frac{1}{2}$ in. long, $1\frac{1}{8}$ in. at widest, and $\frac{1}{8}$ in. thick. Burford. M.

17. Axe or chisel, $4\frac{5}{8}$ in. long. Thinned at both ends. One end roughly so, as if for insertion in a handle. Width of lip $1\frac{1}{2}$ in., of handle end $1\frac{1}{4}$ in. Greatest thickness $\frac{1}{4}$ in. This specimen contains a speck of native silver. Biddulph. M.

18. Axe or chisel, $5\frac{1}{4}$ in. long. Width at lip $1\frac{5}{8}$ in., tapering to $\frac{3}{8}$ in. at head. Greatest thickness $\frac{1}{4}$ in. Noncon Island, Lake Scugog. A. F. Chamberlain.

19. Bead $\frac{5}{8}$ in. long and $\frac{3}{8}$ in. dia. Has been bent to form a hole. London City. M.

20. Nine copper heads on piece of hide as attached originally. Tremont Park, Tidd's Island.

21. Pendant, triangular $2\frac{1}{4}$ in. long. Eye at wide end, which is 1 in. wide Wolfe Island.

22. Small bead, coiled, $\frac{5}{16}$ in. long, and $\frac{1}{8}$ in. dia. Caradoc. S.

23. Double-pointed awl or needle $4\frac{1}{8}$ in. long; $\frac{3}{16}$ in. dia. in middle.

24. Half of button, $1\frac{1}{2}$ in. dia. Mound, Ross. Co., Ohio. W. K. Moorehead.

25. Spear-head' $6\frac{1}{8}$ in. long, tined, $\frac{7}{8}$ in. at the widest, and about $\frac{3}{16}$ in. thick. A strong rib forms the centre of the blade on each side. Dr. Beeming, Perth. (O. L.)

26. One hundred and four copper beads from $\frac{1}{8}$ in. to $\frac{1}{2}$ in. dia., and three pendant spikes about 3 in. long. Pike's Farm, Wolfe Island.

27. Spike or spear $12\frac{1}{2}$ in. long, $\frac{3}{4}$ x $\frac{5}{8}$ in. in middle, and tapering to flat points at each end. Sides square. North bank of River Kaminstiquia at Fort William. Capt. J. S. Smith.

28. Axe or adze with socket. Total length $5\frac{1}{2}$ in. Width at lip $2\frac{1}{2}$, at end of socket $3\frac{3}{8}$ in. The edges are turned almost the whole length to form the socket, but 2 in. from the lip the material is flattened by "shouldering" to form a blade. This implement has the appearance of having been made in a swage. North bank of Kaminstiquia River at Fort William. Capt. J. S. Smith.

29. Axe $6\frac{1}{4}$ in. long, with beaver-skin in which it was wrapped. Pt. Mamainse, Lake Superior.

30. Spike; round; $8\frac{3}{4}$ in. long, $\frac{5}{8}$ in. wide. [Pointed at one end and chisel-edged at the other. Near London, Ont.

CASE Q.

MOSTLY OF UNKNOWN USE.

1. Fifteen brown stone beads from half an inch to three inches long. York P. col.
2. String of blood-stone beads. Y. P. col.
3. Five brown stone beads. Y. P. col.
4. Six blood-stone beads. Beverly Tp. Dwyer col.
5. Eight brown stone beads. Nottawasaga Tp. Lougheed col.
6. Five brown stone beads. Beverly Tp. Dwyer col.
7. One large brown stone bead. Beverly Tp. Dwyer col.
8. One large brown stone bead. Saskatoon, N.W.T. M.
9. Five blood-stone beads. Nottawasaga Tp. Lougheed col.
10. Circular, thin and flat brown slate, nearly 1 in. dia. with eight small holes round margin, one larger than the others as if used for suspension—one small hole in centre. Nottawasaga Tp. Lougheed col.
11. Small flat brown stone pendant (?) Nottawasaga Tp. Lougheed col.
12. Steatite bead, two fragments of steatite objects and one of limestone. Wolfe Island.
13. Hawaiian sling-stone, Helia, Oahu, Sandwich Isles. St. Mary's Institute, Dayton, O.
14. Carved head, perhaps a wolf's; limestone. Nottawasaga Tp. Lougheed col.
15. Finely carved human head $1\frac{1}{4}$ in. long. Beverly Tp. Dwyer col.
16. Bird's head and neck, broken from some large object. Nottawasaga Tp. Lougheed col.
17. $1\frac{3}{4}$ in. long, profile of beaver in blue slate. Nottawasaga Tp. Lougheed col.
18. Profile of quadruped in brown slate about $1\frac{1}{2}$ in. long. Nottawasaga Tp. Lougheed col.
19. Circular, conical (with flattened apex) striped slate $1\frac{3}{4}$ in. dia. and $1\frac{1}{8}$ in. high. Burford Village. S.

20. A hollowed conical stone $2\frac{1}{2}$ in. dia. and $1\frac{1}{4}$ in. deep outside measurement. Outside smooth and shows a laminated structure. Bottom of hollow smoother than sides. Near Woodstock. S.
21. Light blue slate depressed cone; $2\frac{1}{4}$ in. dia. and $1\frac{1}{8}$ in. high. Not hollowed. "God's Country," Hamilton Co., O. W. K. McCrehead, Washington, D. C.
22. A light oval (pumice-like) stone $2\frac{3}{4}$ in. long $2\frac{1}{4}$ in. wide and 1 in. thick in middle. A $5/16$ in. hole goes through the centre, sidewise. McGillivray Tp. M.
23. Slate implement $5\frac{1}{2}$ in. long and from $1\frac{1}{2}$ to 2 in. wide. Thin and shaped like a knife blade. One end fractured within $\frac{3}{4}$ in., of which a small oblique hole is bored. Withrow Avenue, Toronto.
24. Perhaps a "slick-stone"; slate. Caradoc Tp. M.
25. Perhaps a "slick-stone." No locality. S.
26. Pointed instrument of slate $5\frac{3}{4}$ in. long, roughly rounded and tapering to a narrow chisel point $\frac{1}{2}$ in. wide. Greatest dia. about $\frac{3}{8}$ in. Large end broken. Tremont Park, Tidd's Isl. C. A. See.
27. Fragment of pointed weapon $5\frac{1}{8}$ in. long, two sides rounded and smooth, two flat and rough. Large end broken. Dia. at large end 1 in. S.
28. Dark slate $6\frac{1}{4}$ in. long and $\frac{5}{8} \times \frac{3}{8}$ in. in middle. Three sides flat, one rounded. Tapers to blunt point at each end. Norfolk Co. S.
29. Striped slate $4\frac{3}{8}$ in. long, 1 in. wide and $\frac{3}{4}$ in. thick in middle. Three sides nearly flat and slightly convex lengthwise. Fourth side much rounded and bevelled towards each end. With flat side up has a square-ended canoe look. West Williams. M.
30. Light colored striped slate $5\frac{1}{4}$ in. long, much like No. 29 except that the bevelled side is not rounded transversely. Two holes $1\frac{1}{8}$ in. apart, and $1\frac{1}{4}$ in. from each end, have been bored from the straight to bevelled side. Dia. on upper side $5/16$ in. and on lower side barely $\frac{1}{8}$ in. East Williams Tp. S.
31. Dark striped slate, $4\frac{3}{4}$ in. long, similar in outline to Nos. 29 and 30, but deeper in proportion to length, and deeply hollowed from end to end. Two holes are bored through the hollowed and opposite sides, one $1\frac{1}{2}$ in. and the other $13/16$ from the end. Holes have been bored from both sides. Nissouri Tp. S.
32. Light brown double horned or winged stone, $2\frac{1}{2}$ in. long—with a groove surrounding the middle. Boone Co., Ky.
- 33, 34, 35, 36, 37 and 38 are similar in outline, although of different kinds of stone. They are from 2 in. to $3\frac{1}{4}$ in. long, flat, with two rounded sides terminating in points. No. 34 differs from the others in having two holes through it. Except No. 37, these all came from Noncon Isl., L. Scugog. A. F. Chamberlain.
- No. 37 is from Tremont Park, Tidd's Island. C. A. See.
39. Small light blue slate pointed implement. Tremont Park, Tidd's Island. C. A. See.
40. Pointed slate implement with notched end as for a string. The point was broken off when being taken out of the mound. Tremont Park, Tidd's Island. C. A. See.
41. Small slate object like No. 52, case M. Newmarket. S.
42. Plummet-like stone, $2\frac{3}{4}$ in. long and $1\frac{3}{8}$ in. dia. Egg-shaped with small knot at one end. McGillivray Tp. M.

43. A black pebble grooved. This is a doubtful specimen, as the groove is apparently the result of weathering on a soft micaceous vein. Victoria Co. Dickson col.
44. Half of a notched stone. The specimen is oval and the notch is cut a little obliquely round the longer diameter. Miami Valley, O. Dr. Craig, Lawrenceburg. See No. 90.
45. Small brown pebble $1\frac{3}{8}$ in. long and $\frac{1}{2}$ in. wide with notch cut round the middle. Aurora, Ind. J. L. Kassebaum, Aurora, Ind.
46. Water-worn pebble 3 in. long and $2\frac{1}{4}$ in. wide, hollowed. The hollow has probably been deepened artificially, and the specimen may be called a paint-mill, or paint-cup. Miami Valley. Dr. Craig, Lawrenceburg, Ind.
47. Small limestone paint cup (?) Miami Valley. Dr. Collins, Lawrenceburg, Ind.
48. Limestone paint cup (?) West Williams Tp. M.
49. Slate $4\frac{1}{4}$ in. long and $\frac{5}{8}$ in. wide, $\frac{1}{8}$ in. thick, ends broken. Victoria, Brit. Columbia. Jas. Johnson, Vancouver.
50. Fragment of a slate implement. Victoria, Brit. Columbia. Jas. Johnson, Vancouver.
51. Cast of the Cincinnati Tablet. Robt. Clarke, Cincinnati, O.
52. Cast of the Clarke Tablet. Waverly, O. Robt. Clarke, Cincinnati, O.
54. Mottled slate $8\frac{1}{4}$ in. long, nearly $1\frac{1}{2}$ in. wide in middle, where it is also $\frac{5}{8}$ in. thick. At each end it is $\frac{1}{2}$ in. thick. Between the middle and ends it is reduced in beautifully regular curves on one side to $\frac{3}{8}$ in. The same side is smoothly rounded transversely, making a sharp angle with the lower side, which is very smooth and perfectly straight. Cobourg. S.
55. Brown stone bead. Nottawasaga. Herbert Conner.
56. Three brown stone beads. Nottawasaga. Lougheed col.
78. Round and tapering fragment of stone implement $5\frac{5}{8}$ in. long. Greatest dia. $1\frac{1}{8}$ in. McGillivray Tp. M.
79. Black slate $4\frac{3}{8}$ in. long, $\frac{5}{8}$ in. wide, $\frac{3}{8}$ in. thick, three sides flat, one rounded both ways. Ends thin. Caradoc Tp. M.
80. Striped slate $5\frac{5}{8}$ in. long and $9/16$ thick. Pointed; one side flat, others rounded. $2\frac{1}{4}$ in. from point is a portion $1\frac{3}{4}$ in. long, $1\frac{1}{2}$ in. wide and $\frac{3}{4}$ in. thick, forming a flattened bulb. Near Hamilton, Butler Co., O. W. K. Moorehead.
81. Brown veined slate 6 in. long, $1\frac{5}{8}$ in. wide in middle, whence it decreases by curved sides to $\frac{5}{8}$ in. wide at each end. About $\frac{3}{8}$ in. thick. One side flat, on which $1\frac{3}{4}$ in. apart and equi-distant from the centre, lengthwise, are the beginnings of two holes. Shelby Co., O. Prof. Moritz Fischer, Frankfort, Ky.
82. $5\frac{1}{8}$ in. long, similar to No. 81. (No holes). Mason Co., W. Virginia. W. K. Moorehead.
83. Gray slate, $4\frac{7}{8}$ in. long. Dia. at widest 1 in. and at thickest $\frac{3}{4}$ in. Resembles No. 80, but is pointed at both ends and the bulb is more elongated. Point of longer end broken. Near Hartford, Mason Co., W. Virginia. W. K. Moorehead.
84. Dark veined slate, $5\frac{3}{4}$ in. long, 1 in. wide and $\frac{3}{8}$ in. thick in middle. Three sides flat, one rounded and bevelled to each end. A shallow groove goes round two adjoining sides. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

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85. Brown slate $3\frac{3}{8}$ in. long. Greatest dia. $1\frac{3}{4}$ in. $2\frac{3}{8}$ in. from widest part to one end, may be regarded as the body of some animal. The other end is the unfinished head and neck. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

86. Granite, 3 in. long. Much like No. 31. One end broken. The one hole remaining has been bored from the hollowed side. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

87. Sandstone, $2\frac{3}{4}$ in. long, $2\frac{1}{8}$ in. wide and $\frac{1}{4}$ in. thick in middle. Oval. Edge has twenty-two deep sharply angular notches. Hole through smaller end. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

88. Quartzite, 2 in. long, $1\frac{1}{2}$ in. dia. Plummet-like. No knob on smaller end. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

89. Conglomerate, $2\frac{1}{8}$ in. long, $1\frac{1}{8}$ in. dia. Plummet-like. Grooved round small end to form knob. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

90. Sandstone, $2\frac{1}{4}$ in. long, $1\frac{3}{4}$ in. wide and $1\frac{1}{4}$ in. thick. Flat on one side. The rest of the surface rounded. A groove along the rounded side in the direction of longer axis. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

91. Close-grained, mottled, argillite. $6\frac{1}{4}$ in. long, 1 in. wide and $\frac{5}{8}$ in. thick at largest. Tapers on two sides to a chisel point at one end, and on three sides to a pick-point at the other. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

92. Slate, $5\frac{3}{4}$ in. long, $1\frac{1}{2}$ in. wide at one end and $\frac{1}{2}$ in. wide at the other. About $\frac{1}{4}$ in. thick. Edges rounded. Hole bored 1 in. from small end. Large end bevelled from both sides to an edge. Miami Valley. C. J. B. Ratjen, Lawrenceburg, Ind.

With the exception of the beads, it is impossible in the present state of knowledge to give suitable names with certainty to the objects in this case. Many of them also are indescribable for want of space.

CASE R.

CLAY PIPES

1. Nottawasaga. Lougheed col.
2. Nottawasaga. Lougheed col.
3. Highland Creek. Y. P. col.
4. Lake Medad.
5. Nottawasaga. Lougheed col.
6. Eramosa.
7. Beverly. Dwyer col.
8. Nottawasaga. Lougheed col.
9. Nottawasaga. Lougheed col.
10. No record. Y. P. col.
11. Beverly. Dwyer col.
12. No report. Y. P. col.
13. No report. Y. P. col.

14. Beverly. Dwyer.
15. Nottawasaga. Lougheed col.
16. Nottawasaga. Lougheed col.
17. No record. Y. P. col.
18. Forest. S.
19. Holland Landing. S.
20. Nottawasaga. Lougheed col.
21. Vaughan.
22. No record. Y. P. col.
23. Nottawasaga. Lougheed col.
24. Ste. Marie. Simcoe Co.
25. Beverly. Dwyer col.
26. Beverly. Dwyer col.
27. Nottawasaga. Lougheed col. (2)
28. Nottawasaga. Lougheed col. (2)
29. Nottawasaga. Lougheed col.
30. Nottawasaga. Lougheed col.
31. Nottawasaga. Lougheed col.
32. Orillia. L. Hayden, Toronto.
33. York Tp. B. Jackes, Toronto.
34. Beverly. Jas. Rae.
35. Beverly. Jas. Rae.
36. No record.
37. York Tp. B. Jackes, Toronto.
38. Near Lake Simcoe. S.
39. Nottawasaga. Lougheed col.
40. Nottawasaga. Lougheed col.
41. No record. Y. P. col.
42. Nottawasaga. Lougheed col.
43. No record. Y. P. col.
44. No record. Y. P. col.
45. Nottawasaga. Lougheed.
46. No record. Y. P. col.
47. Onentisati. Simcoe Co.
48. Nottawasaga. Lougheed col.
49. Orillia. Basil R. Rowe.
50. No record. Y. P. col.
51. No record. Y. P. col.
52. No record. Y. P. col.
53. York Tp. B. Jackes.
54. Nottawasaga. Lougheed col.

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- 55. Eglinton, York Tp. Y. P. col.
 - 56. Eglinton, York Tp. Y. P. col.
 - 57. Eglinton, York Tp. B. Jackes.
 - 58. Nottawasaga. Lougheed col.
 - 59. Onentisati. Simcoe Co.
 - 60. No record. Y. P. col.
 - 61. Ste. Marie. Simcoe Co.
 - 62. York Tp. B. Jackes.
 - 63. McGillivray Tp. M.
 - 64. Nottawasaga. Lougheed col. (3)
 - 65. Lake Medad. C. Macpherson.
 - 66. Onentisati. Simcoe Co.
 - 67. Beverly. Dwyer col.
 - 68. Penetanguishene. F. A. Benson.
 - 69. York Tp. B. Jackes.
 - 70. No record. Y. P. col.
 - 71. Nottawasaga. Lougheed col. (2)
 - 72. Ste. Marie. Simcoe Co.
 - 73. Victoria Co. Dickson col.
 - 74. Victoria Co. Dickson col.
 - 75. Victoria Co. Dickson col.
 - 76. No record. Y. P. col.
 - 77. No record. Y. P. col.
 - 78. No record. Y. P. col.
 - 144. Lambton Mills, York Tp.

CASE S.

CLAY PIPES.

- 79. York Tp. J. Kirkwood.
- 80. Nottawasaga. Lougheed col. (Owl's head from lip of bowl.)
- 81. Nottawasaga. Lougheed col. (Human face, open mouth.)
- 82. Nottawasaga. Lougheed col. (Human face.)
- 83. Nottawasaga. Lougheed col. (Human face.)
- 84. Nottawasaga. Lougheed col. (Human face.)
- 85. Nottawasaga. Lougheed col. (Human face, elongated.)
- 86. Nottawasaga. Lougheed col. (Human face, elongated.)
- 87.
- 88. Nottawasaga. Lougheed col. (Human face.)

89. Onentisati. Simcoe Co. (Eagle's head on lip.)
 90. Beverly. Jas. Rae. (Snake's head.)
 91. Nottawasaga. Lougheed col. (Owl's head.)
 92. Nottawasaga. Lougheed col. (Two human faces from bowl.)
 93. Nottawasaga. Lougheed col. (Spiral coil round bowl.)
 94. Nottawasaga. Lougheed col.
 95. Nottawasaga. Lougheed col. (2 birds' heads from pipes.)
 96. Near L Simcoe. S. (Double human face, forward and backward.)
 97. Nottawasaga. Lougheed col. (Human face.)
 98. Nottawasaga. Lougheed col. (Square mouth.)
 99. Onentisati. Simcoe Co. (Square mouth.)
 100. Ste. Marie. Simcoe Co. (Square mouth.)
 101. Nottawasaga. Lougheed col. (Square mouth.)
 102. Nottawasaga. Lougheed col. (Square mouth.)
 103. Nottawasaga. Lougheed col. (Square mouth.)
 104. Nottawasaga. Lougheed col. (Square mouth.)
 105. Lake Medad. C. Macpherson. (Square mouth.)
 106. Victoria Co. Dickson col.
 107. Victoria Co. Dickson col.
 108. Victoria Co. Dickson col.
 109. Ancaster. J. E. McCrimmon. (Human form, head broken.)
 110. Nottawasaga. Lougheed col. (Fox's head ?)
 111. York Tp. George Miller.
 112. York Tp. George Miller.
 113. York Tp. George Miller.
 114. Nottawasaga. David Melville.
 115. Nottawasaga. Ed. Coyle. (Human face.)
 116. " " "
 117. Nottawasaga. Thos. White. (Fragment diagonally marked on upper edge.)
 118. Nottawasaga. David Melville. (Oval curve.)
 119. Nottawasaga. David Melville. (Stem of pipe like 118.)
 120. Nottawasaga. David Melville.
 121. Nottawasaga. David Melville. (Square mouth.)
 122. Nottawasaga. David Melville. (Square mouth.)
 123. Nottawasaga. David Melville.
 124. Nottawasaga. Lougheed col. (Human face elongated.)
 125. Nottawasaga. David Melville.
 126. Nottawasaga. David Melville.
 127. Nottawasaga. Mr. Doner.
 128. Nottawasaga. Herbert Conner. (Square mouth.)
 129. Nottawasaga. Dugald Currie.
 130. Nottawasaga. Thos. White.
 131. Nottawasaga. Thos. White.

132. Nottawasaga. Thos. White.
 133. Nottawasaga. Lougheed col. (Human figure, broken.)
 134. " " " "
 135. Lake Medad. Mr. Lillycrop. (Human face from pipe.)
 136. Nottawasaga. David Melville. (Human face from pipe.)
 137. Nottawasaga. Herbert Conner.
 138. Nottawasaga. Lougheed col.
 139. Victoria Co. Dickson col.
 140. Nottawasaga. Lougheed col. (Dog's head.)
 141. Lake Medad. Luke Mullock.
 142. Nottawasaga. Herbert Conner.
 143. Nottawasaga. Herbert Conner.
 144. (See case R.)
 145. Lake Medad. Luke Mullock.
 146. Nottawasaga. Thos. White. (Human face.)
 147. Humberstone Tp. Cyrenius Bearss. (Small.)
 148. Humberstone Tp. Cyrenius Bearss.
 149. Humberstone Tp. Cyrenius Bearss.
 150. Humberstone Tp. Isaac Bearss.
 151. Dumfries Tp. Jas. G. Caven.
 152. York Tp. Geo. Miller.
 153. Amberly Tp. Wm. Welsh. (Square mouth, fragment.)
 154. Tremont Park, Tidd's Islands. C. A. See. (Stem.)
 155. Eglinton, York Tp. W. G. Long. (Long stem.)
 156. Nottawasaga. Snake head. Angus Buie.
- This case contains also a large number of stems from various localities.

CASE T.

Discs.

1 to 6. Six discoidal stones (varying from $2\frac{1}{2}$ to $3\frac{1}{2}$ in. in diameter) said to have been used in playing a game by rolling them along the ground, opponents aiming missiles at them when in motion, and bets being made as to where they would stop, or which side would lie uppermost. Dr. Craig, Lawrenceburg, Ind.

7 to 12. Six small discoidal stones. The smallest $\frac{3}{8}$ of an in. in diameter and the largest $2\frac{1}{2}$. No. 9 is marked by four lines cut on both sides, crossing each other near the centre and extending to the margin. Geo. Lougheed, Nottawasaga.

12 $\frac{1}{2}$ and 13. Two stones apparently in preparation for discs. Originally they were water-worn, but there are evidences of manipulation by pecking on the flattened sides. Dr. Craig, Lawrenceburg, Ind.

14 Rude or unfinished disc. Both sides hollowed as if to aid in grasping. Edges of stone not circular. Natural Hist. Soc. Brookville, Ind.

15. Discoidal stone, 4 in. in dia., well hollowed on both sides. S.
16. Discoidal stone unfinished; $3\frac{3}{4}$ in. dia., sides hollowed, but periphery not made quite circular. From New York State. Moses Barrowman, Buffalo.
17. Small discoidal stone $1\frac{3}{4}$ in. dia., hollowed on both sides. From Ohio, U.S. Nat. Hist. Soc. Cincinnati, O.
18. Discoidal stone $2\frac{1}{4}$ in. dia., hollowed on sides. S.
19. Discoidal stone, $2\frac{1}{4}$ in. dia., flat sides. "Used in a Hawaiian game—the object being to see who could roll it furthest on a smooth path." The specimen is interesting as being so like many found in Canada and the United States, Hawaii, Sandwich Islands. Rev. Bro. Joseph, St. Mary's Academy, Dayton, O.
20. Discoidal stone $2\frac{1}{2}$ in. dia., sides flat. Ste. Marie, Simcoe Co., Ont.
- 21 to 25. Discoidal stones, $1\frac{1}{4}$ in. to $1\frac{1}{2}$ in. dia., sides flat, 21 and 25 perforated in the centre. From York Tp. W. G. Long, Lansing, York Tp.
26. Discoidal stone, $1\frac{1}{2}$ in. dia., sides convex. From West Virginia, U. S. Nat. Hist. Soc. Brookville, Ind.
27. Discoidal stone, $1\frac{1}{2}$ in. dia., sides flat. Perforated. From Goose Lake, near L. Simcoe. S.
28. Discoidal stone, $2\frac{1}{2}$ in. in dia., both sides concave. Miama Valley, near Lawrenceburg. C. J. B. Ratjen, Lawrenceburg, Ind.
29. Discoidal stones, $2\frac{1}{8}$ in. in dia., both sides deeply concave. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.
30. Discoidal stone, 2 in. in dia. Edge much rounded, both sides hollow. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.
31. Discoidal stone, 2 in. in dia., sides hollow. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.
32. Discoidal stone, $1\frac{5}{8}$ in. in dia. This specimen differs from all the other hollow sided ones on account of the cavities not merging imperceptibly into the rounded edge. The rounding of the edge is carried $\frac{3}{8}$ of an inch over the side and nearly an eighth of an in. deep, so as to form a sharply defined collar, the central portion being but slightly hollowed. Same locality. C. J. B. Ratjen, Lawrenceburg, Ind.
33. Discoidal stone. $1\frac{1}{2}$ in. in dia. $\frac{3}{8}$ in. thick. So deeply hollowed on both sides that the thickness in the middle is barely $\frac{1}{8}$ of an inch. C. J. B. Ratjen, Lawrenceburg, Ind.
34. Discoidal stone. $1\frac{7}{8}$ in. in dia. $\frac{7}{8}$ in. thick. Flat on both sides. Nottawasaga.
35. Disc; clay. $1\frac{1}{8}$ in. in dia. $\frac{3}{8}$ in. thick. Eglington, York township. Long collection.
- Nos. 1 to 4, and $12\frac{1}{2}$ to 16 are classified by some as hammers, a few of these may have been used thus, but others show no signs of such application. Nos. 1, 3, $12\frac{1}{2}$, 13 and 16 retain their original ovate form as viewed from the flattened or hollowed sides.
- 36 to 40. Discoidal stones from 1 in. to 3 in. dia. Nottawasaga. David Melville.
- 41 to 44. Discoidal stones from 1 in. to $1\frac{1}{2}$ in. dia. Nottawasaga. William Melville.

RUBBING STONES.

- 1 and 2. Rubbing stones, roughly circular, flat and smooth on both sides, 5 in. dia. Orillia. Basil Rowe.

PESTLES.

- 3 to 6. Rudely formed pestles from 5 to 7 in. long; cross section oval West Middlesex. M.
7. Pestle, 7 in. long. McGillivray Tp. M.
8. Pestle, 13 in. long, and 2½ in. dia. in middle. Has a small hole bored in one side near the middle. Simcoe. S.
9. Pestle, 10 in. long and 2½ in. dia. Simcoe. S.
10. Pestle, 8 in. long, and 2 in. dia. W. Middlesex. M.
11. Pestle, 12 in. long and 2 in. dia. McGillivray Tp. M.
12. Pestle, 8½ in. long, 2¾ in. dia. No locality. Y. P. col. (This may not be more than a water-worn stone.)
13. Pestle, 4¾ in. long and 1½ in. dia. Ft. Gratiot, Mich.
14. Pestle, 5¼ in. long, conical; diameter of base 2½ x 3¼ in.; of head, 1¼ in.; it is worn off on the face or base end at an angle. No locality. Y. P. col.
15. Pestle, 4½ in. long and 2½ in. dia.; is a little flared at base; upper end or head rounded off. Kentucky. Geological Survey of Kentucky, Prof. Moritz Fischer.
16. Pestle, 3½ in. long, conical; diameter of base 2½ in., tapers to 1 in. Shelby Co., Kentucky. Nat. Hist. Soc., Brookville, Indiana.
17. Pestle, 5¼ in. long, conical; dia. of base 3 in.; head rounded. Linn Co., Missouri. Dr. Rear.
18. Pestle, 6½ in. long, base broken. Humberstone Tp. Cyrenius Bearss.

CASE U.

GROOVED STONE AXES AND HAMMERS.

1. Axe, 8 in. by 4¾ in., grooved all round. Lake Superior. Y. P. col.
2. Axe, 6¾ in. by 4 in. one edge ungrooved. Bourbon Co., Ky. Kentucky Geological Survey, Frankfort.
3. Axe, 7¼ in. by 4 in., one edge ungrooved. Miami Valley, Ind. C. J. B. Ratjen, Lawrenceburg, Ind.
4. Axe, 6 in. by 3 in., Aurora, Ind., one edge ungrooved. J. L. Kassebaum, Aurora, Ind.
5. Axe, 7½ in. by 2½ in., one edge ungrooved. Miami Valley. C. J. B. Ratjen, Lawrenceburg.
6. Axe, 5 in. by 4 in., one edge ungrooved. No locality. Y. P. col.
7. 5¼ in. by 3 in., one edge ungrooved and hollowed lengthwise. Linn Co., Missouri.

8. Axe, 5 in. by 3 in., one edge ungrooved. Shelby Co., Ind. Nat. Hist. Soc., Brookville, Ind.
9. Axe, 5 in. by $3\frac{1}{2}$ in., one edge ungrooved. Franklin Co., Ind. Nat. Hist. Soc., Brookville, Ind.
10. 5 in. by $2\frac{3}{4}$ in., one edge ungrooved and hollowed lengthwise. Miami Valley. Dr. Craig, Lawrenceburg, Ind.
11. Axe, $4\frac{1}{4}$ in. by 3 in., one edge ungrooved. Garrard Co., Ky. Nat. Hist. Soc., Brookville, Ind.
12. Axe, 7 in. by $3\frac{1}{2}$, grooved all round. Miami Valley, Ind. Dr. Craig, Lawrenceburg.
13. Axe, 7 in. by 3 in., grooved all round. East Williams Tp. M.
14. Axe, $5\frac{1}{2}$ in. by $2\frac{3}{4}$ in., grooved all round. McGillivray Tp. M.
15. Axe, $5\frac{3}{4}$ in. by 3 in., grooved all round. West Williams Tp. M.
16. Axe, 6 in. by $4\frac{1}{4}$, grooved all round. Near Weston Village. Dr. Richardson.
17. Axe, $7\frac{1}{2}$ in. by $3\frac{1}{2}$, grooved all round. Arkona. M.
18. Axe, 6 in. by $3\frac{1}{2}$ in., grooved all round. W. Middlesex. M.
19. Axe, $5\frac{1}{4}$ in. by $4\frac{1}{2}$ in., grooved all round. Linn Co., Mo.
20. Axe, $5\frac{1}{2}$ in. by $2\frac{1}{4}$ in., grooved all round. Miami Valley. Dr. Craig, Lawrenceburg.
21. Axe, 5 in. by $2\frac{3}{4}$ in., grooved all round. Miami Valley. Dr. Craig, Lawrenceburg.
22. Axe, 4 in. by 3 in., grooved all round. J. C. Kassebaum. Aurora, Ind.
23. Axe, $3\frac{3}{4}$ in. by $2\frac{3}{4}$ in., grooved all round. Shelby Co., Ky. Nat. Hist. Soc., Brookville, Ind.
24. Axe, 4 in. by $2\frac{1}{4}$ in., grooved all round. McGillivray Tp. M.
25. Axe, $3\frac{1}{2}$ in. by $2\frac{1}{2}$ in., grooved all round. Brookfield, Mo.
26. Axe, 3 in. by 2 in., grooved all round. East Williams Tp. M.
27. Axe, $4\frac{1}{2}$ in. by 3 in., grooved all round. McGillivray Tp. M.
28. Axe, $4\frac{3}{4}$ in. by $2\frac{3}{4}$ in., grooved all round. No locality. Y. P. col.
29. Axe, $5\frac{1}{4}$ in. by $3\frac{1}{4}$ in., grooved all round. No locality. Y. P. col.
30. Axe, $6\frac{1}{4}$ in. by $3\frac{1}{2}$ in., chiefly grooved on the two edges. McGillivray. M.
31. Axe, $6\frac{1}{4}$ in. by $3\frac{1}{4}$ in., groove shallow all round. No locality. Y. P. col.
32. Axe, 6 in. by $3\frac{1}{2}$ in., grooved chiefly on edges. No record.
33. Axe, $3\frac{3}{4}$ in. by $2\frac{1}{2}$ in., one edge ungrooved. Shelby Co., Ky. Brookville Nat. Hist. Soc., Ind.
34. Axe, $3\frac{3}{4}$ in. by $1\frac{3}{4}$ in., one edge ungrooved. Brookfield, Mo.
35. Axe, 3 in. by 2 in., thin and slightly grooved. Linn Co., Mo.
36. Axe, $4\frac{1}{4}$ in. by $2\frac{1}{2}$ in., very slightly grooved, and mainly on the edges. Shelby Co., Ky. Brookville Nat. Hist. Soc., Ind.
37. Axe, $5\frac{1}{2}$ in. by $2\frac{3}{4}$ in., grooved mostly on edges. No record.
38. Axe, 6 in. by 3 in., grooved all round. No record.
39. Axe, $7\frac{1}{2}$ in. by $4\frac{1}{4}$ in., grooved all round with stony projections formed on edges above and below groove. No record.
40. Axe, $6\frac{3}{4}$ in. by $4\frac{1}{2}$ in., similar to No. 39. No record.

d. Nat. Hist.

41. Hammer, $7\frac{1}{2}$ in. by $5\frac{1}{2}$ in. Lake Superior.

d. Nat. Hist.

42. Hammer, $6\frac{1}{2}$ in. by $3\frac{1}{2}$ in. Is evidently only a water-worn stone whose shape has suggested use, and has been slightly hollowed in two sides either for attachment to a handle, or to aid in holding directly in the hand.

wise. Miami

43. Hammer, 6 in. by 4 in. 45 miles north-west of Brandon, Man. Is deeply grooved and well shaped. M.

y. Nat. Hist.

44. Hammer, 5 in. by $4\frac{1}{2}$ in., cylindrical and grooved near the middle. Point Edward. M.

l. Dr. Craig,

45. Hammer, $6\frac{3}{4}$ in. by $4\frac{1}{2}$ in., grooved about one-third from smaller end. Leamington, Essex Co.

M.

46. Hammer, $5\frac{3}{4}$ in. by $3\frac{3}{4}$ in. Has originally been a fine implement—is now broken on one side of each end. Thunder Bay.

M.

M.

47. Hammer, 3 in. by 3 in., grooved near the middle. Thunder Bay.

r. Richardson.

48. $5\frac{1}{2}$ in. by 5 in. Is a flat water-worn stone. Has originally been somewhat ovate and has now two deeply cut notches on the edges $1\frac{1}{4}$ in. from the smaller end. Point Edward. M.

. Dr. Craig,

49. 8 in. by $5\frac{1}{2}$ in. Corresponds in character to No. 48. Biddulph. M. Neither of these bears any marks to indicate use as a hammer. Perhaps they were used as anchors for the frail birch-bark canoes close to shore. The fact, however, that the latter was found inland, does not add force to this conjecture, unless the same use was made of it for river purposes.

. Dr. Craig,

Aurora, Ind.

. Nat. Hist.

M.

M.

I.

. col.

. col.

Billivray. M.

Y. P. col.

Brookville

n the edges.

s formed on

CASE V.

POTTERY.

This case contains a large number of pottery fragments, illustrative of markings or patterns. The specimens are from various parts of this Province and United States. The principal contributors are: Jas. Dickson, P. L. S., Fenelon Falls; Jas. Dwyer, Beverly; T. H. Hulbert, Duluth; Cyrenius Bearss, Humberstone; John McPherson, Toronto; Dr. T. W. Beeman, Perth; F. A. Benson, Port Hope; William Welsh, Amberley; Society of Natural History, Cincinnati; Prof. J. L. Deming, Technological Institute, Boston; Thos. White, Nottawasaga; Jas. Rae, Beverly; W. J. Long, Lansing; Albert Lougheed, Nottawasaga; G. Laidlaw, of "The Fort"; David Boyle, sr., Richmond Hill, J. L. Kassebaum, Aurora, Indiana; and C. Bell, Toronto.

The finest specimen is that presented by Mr. John McPherson. It consists of several pieces now cemented, and shows the outline and proportions of what must have been a very handsome vessel about 9 in. high, 7 in dia. at the widest part, and 5 in. in dia. at the mouth. It was found in Mr. McPherson's island, Mindemoya, in a lake of the same name in Manitoulin Island.

CASE W.

CLEARVILLE SPECIMENS.

This case contains specimens of horn, bone, shell, clay and stone from the site of a fortified village at Clearville, Kent Co., Ont.

18 deer-horn prongs, showing rude human workmanship.

30 bone awls or needles, from $1\frac{1}{2}$ in. to 7 in. long.

2 dorsal spines of a large fish. These are about $1\frac{1}{2}$ in. long, triangular in cross section and very sharp.

1 beaver's tooth.

2 muskrats' teeth.

10 unio valves, some of these have been used as scrapers, and one evidently by a left-handed person.

1 walnut.

9 clay pipe-stems.

6 pipe heads, but all imperfect. One is very rude in form, and one is remarkable for its fine finish and design.

3 pieces of burnt clay, showing manipulation.

7 fragments of large and coarse clay vessels.

19 fragments of smaller and finer vessels.

8 rudely made stone chisels.

8 roughly chipped flints.

7 stones, smoothly rubbed.

1 piece of red jasper.

1 sinker—so called.

1 semi-circular, grooved stone.

CASE X.

DRILLS.

1. Drill, 2 in. long, broken, T head. Curtis Farm, Linn Co., Mo. Dr. Rear, Toronto.

2. Drill, 2 in. long, unsymmetrical, rounded head. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.

3. Drill, $1\frac{1}{8}$ in. long, T head. Bourbon Co., Ky. Dr. Collins, Lawrenceburg, Ind.

4. Drill, $2\frac{1}{4}$ in. long, notched head, seems to have been an arrow modified for drilling purposes. Middlesex Co., Ont. M.

5. Drill, $2\frac{1}{4}$ in. long, broken, head merely a little broader than body and thinner at end. Curtis Farm, Linn Co., Mo. Dr. Rear, Toronto.

6. Drill, $1\frac{1}{4}$ in. long, rude, head smaller than body.

7. Drill 1 in. long, half of head broken off crosswise.
8. Drill $1\frac{3}{8}$ in. long, rounded head.
9. Drill $1\frac{3}{8}$ in. long, notched head. Outline like arrow, but is flat on one side and round on the other, body comparatively thick, and curved considerably at the point. Nos. 6, 7, 8, and 9, from Pike's Farm, Wolfe Isl.
10. Drill, $3\frac{1}{8}$ in. long, T head, body rhomboidal, and twisted. McGillivray Township, Middlesex, Ont. M.
11. Drill, $2\frac{7}{8}$ in. long, head broken.
12. Drill $2\frac{1}{4}$ in. long, head a slight expansion of body, and thinned.
13. Drill 2 in. long, point broken, sharply cut T head.
14. Drill $1\frac{5}{8}$ in. long; head like a T double barred, the upper portion being the lesser in size. Nos. 11, 12, 13 and 14, from Townships of East and West Williams. Middlesex Co, M.
15. Drill, $3\frac{3}{8}$ in. long; no marked head, one side of body comparatively flat, curved near the point; greatest width (at head end) $\frac{5}{8}$ in. Pike's Farm, Wolfe Island.
16. Drill, 1 in. long, obscure T head, point broken.
17. Drill, $1\frac{3}{4}$ in. long, obscure T head, body curved diagonally, the material is dark blue for half the distance at the head end, the other half being white.
18. Drill, $1\frac{1}{4}$ in. long, head broken. } Both seem as if made for being inserted
19. Drill, $1\frac{1}{4}$ in. long, head wedged. } and fastened in a cleft handle.
20. Drill, $\frac{7}{8}$ in. long, T head, sharply pointed. Nos. 16, 17, 18, 19, and 20, from Miami Valley, Ind. Dr. Craig, Lawrenceburg.
21. Drill, $1\frac{3}{4}$ in. long, 1 in. wide in middle; drilling portion only $\frac{3}{8}$ in. long, and $\frac{1}{4}$ in. wide at point; notched neck for fastening to handle $\frac{5}{8}$ in. long.
22. Drill, $1\frac{3}{8}$ in. long, broken; unsymmetrical T head.
23. Drill, $\frac{3}{4}$ in. long, broken; good T head.
24. Drill, $1\frac{1}{8}$ in. long, T projection, $\frac{7}{8}$ wide near middle; notched neck for handle.
25. Drill, $2\frac{1}{4}$ in. long, $\frac{3}{4}$ in. wide, obscure neck; roughly chipped; may have been a badly made arrow-tip.
26. Drill, $2\frac{7}{8}$ in. long, point broken, $\frac{1}{4}$ in. wide at break; T head.
27. Drill, $2\frac{3}{8}$ in. long, neck broken, $\frac{5}{8}$ in. at widest part; might have been an arrow, but is worn smooth on sides and edges.
28. Drill, 3 in. long, notched neck; slightly curved; flat on one side.
29. Drill, $2\frac{3}{8}$ in. long, imperfect, oblique T head.
30. Drill, $2\frac{7}{8}$ in. long, club-shaped head; tip broken.
31. Drill, $2\frac{3}{8}$ in. long, $\frac{1}{2}$ in. wide; neck broken; white flint.
32. Drill, $1\frac{1}{2}$ in. long, $\frac{3}{8}$ in. wide; head broken.
(21 to 32 from collection presented by Jas. Dickson, Esq., Fenelon Falls.)
33. Drill, $1\frac{5}{8}$ in. long, $\frac{1}{2}$ in. wide; thick, and rudely chipped: notched with T head.
34. Drill, $1\frac{5}{8}$ in. long, $\frac{3}{8}$ in. wide; slightly curved and rudely made; head appears to have been broken.

35. Drill, $1\frac{1}{4}$ in. long; otherwise like No. 34.
 36. Drill, $2\frac{3}{8}$ in. long, $\frac{3}{8}$ in. wide; point broken; club-shaped head.
 37. Drill, 2 in. long, flat on one side and slightly curved; obscure neck; rude.
 38. Drill, $3\frac{7}{8}$ in. long, $1\frac{1}{4}$ in. wide in front of neck; for $\frac{2}{3}$ of length from head is as flat as an arrow, but takes rhomboidal form near the point, decreasing to $\frac{1}{4}$ in. in width at the same distance from tip.
 (33 to 38 from counties of Wentworth and Waterloo.)

39 to 76. These were procured from Mr. C. J. B. Ratjen, of Lawrenceburg, Indiana, and were all collected in the Miami Valley. They vary from 1 in. to $4\frac{1}{2}$ in. long, and from $\frac{1}{4}$ to $1\frac{1}{8}$ in. in width. Some are T headed, others club-headed, and many are simply thinned for insertion in a handle. There is no notched specimen among them.

72 and 73, both imperfect, are serrated on the edges, which are now worn as if the specimens had been used as saws. 42, 43, and 44, may have been arrow-tips, but all the others were no doubt drills.

CASE Y.

SLATE WEAPONS.

These objects are shaped like arrow and spear heads. Some writers regard such specimens as knives. They were probably rather of an ornamental character and intended for purposes of display in connection with feasts, dances, and other celebrations. They are not very common in this country.

1 to 3. Western Ontario. S.

4. Broad in proportion to length, being 5 in. long, (including the neck, $1\frac{1}{2}$ in.) and $2\frac{3}{4}$ in. wide at the base; it is squarely shouldered to form the neck. Wolfe Island.

5. $4\frac{1}{4}$ in. long, 2 in. wide, and very thin; slightly barbed; the neck is of a kind peculiar to this class of object, being carefully notched or serrated on each edge as if to assist in binding to a shaft. Another peculiarity is that the neck although $\frac{5}{8}$ in. long, measures $1\frac{1}{8}$ in. behind the barbs and tapers to $\frac{3}{8}$ in. at the base. This shape would seem to add to the difficulty of fastening. S.

6. $2\frac{3}{4}$ in. long, with neck similar to No. 5. Caradoc Tp. S.

7. $3\frac{1}{4}$ in. long, square-shouldered, neck which is tapering like Nos. 5 and 6, but not serrated. S.

8. $2\frac{3}{4}$ in. long, neck broken. S.

9. $2\frac{3}{4}$ in. long, deeply barbed, tapering and serrated neck.

10. $3\frac{3}{8}$ in. long, very perfect, square-shouldered, tapering and round edged neck. Nottawasaga. Lougheed col.

11. $3\frac{3}{8}$ in. long, single barbed, neck tapering and round edged. Withrow Avenue, Toronto.

12. $3\frac{3}{8}$ in. long, slightly barbed, with nearly parallel-sided and square-edged neck. S.

13. $4\frac{1}{4}$ in. long, very slightly barbed, neck parallel-sided and square-edged. S.

14. $3\frac{1}{2}$ in. long, deeply barbed; neck broken partly off; round-edged. Nottawasaga. Lougheed col.

15. 5 in. long, sharp rib along middle, barbed; neck slightly tapering and round-edged. S.

16. $2\frac{3}{8}$ in. long, barbs broken; has the appearance of having been bored on each side to form neck. Wolfe Island.

17. $3\frac{1}{2}$ in. long, square-shouldered; tapering, round-edged neck. Downie Tp. P. R. Jarvis.

18. $1\frac{1}{4}$ in. long, slightly barbed. This small specimen is exceptional in the form of the neck, for although serrated, it is somewhat wider below than above. Lakefield. R. Q. Dench.

19. 4 in. long, considerably mutilated. S.

20. $3\frac{1}{2}$ in. long; is a fragment of some tool or weapon; one side slightly convex, and the other strongly ribbed. Lambton Mills. Wardie and Ottie White, Toronto.

In this case are also:—

1. 11 in. long, $1\frac{5}{8}$ wide, and $\frac{3}{4}$ in. thick; sides convex and corners rounded; one end is square and blunt, and measures $1\frac{1}{8}$ in. wide, the other is thinned to an edge and is only $\frac{5}{8}$ in. wide. On one side is a scratched figure like a capital T, the lower end of the upright stroke being forked, and on the opposite side a similar mark but with a bar across the middle of the upright. Arkona. S.

2. $11\frac{3}{8}$ in. long, $1\frac{1}{4}$ in. wide, and $\frac{3}{4}$ in. thick; one end 1 in. wide and chisel-edged; the opposite end $\frac{1}{2}$ in. wide, thinned and rounded. West Williams Tp. M.

3. $8\frac{3}{8}$ in. long, $1\frac{3}{8}$ in. wide, and $\frac{7}{8}$ in. thick; one end 1 in. wide, thinned, but blunted as if from use. The opposite end terminates in a rounded point about $\frac{3}{8}$ in. diameter. Point Edward.

4. $11\frac{3}{4}$ in. long, $1\frac{1}{8}$ in. wide, and $1\frac{1}{8}$ in. thick; tapering to both ends, one of which is $\frac{3}{4}$ in. wide, and the other $5/16$ in., both are chisel-edged. Chief Smith. Brantford.

Axe of striped slate, $6\frac{1}{4}$ in. long, and $3\frac{3}{8}$ in. across the mouth. Looked at sidewise it has the appearance of an elongated pear. Richmond, Indiana.

CASE Z.

MISSCELLANEOUS,

1. Smoothly rubbed stone. A. W. Reavley.
2. Flint. A. W. Reavley.
3. " "
4. " "
5. " "
6. " "
7. Stone axe. Wm. Michener. Humberstone.

- | | | |
|-----|--|-----------------|
| 8. | Bone awl or needle. | Wm. Melville. |
| 9. | " | " |
| 10. | " | " |
| 11. | Clay pipe | " |
| 12. | " | " |
| 13. | " | " |
| 14. | " | " |
| 15. | " | " |
| 16. | " | " |
| 17. | " | " |
| 18. | " | " |
| 19. | " | " |
| 20. | " | " |
| 21. | " | " |
| 22. | " | " |
| 23. | Stone tablet | " |
| 24. | Small notched bone or needie. | Wm. Melville. |
| 25. | Small discoidal stone. | Wm. Melville. |
| 26. | " | " |
| 27. | " | " |
| 28. | " | " |
| 29. | Several pipe stems, stone | " |
| 30. | Small bone chisel. | David Melville. |
| 31. | Worked bone | " |
| 32. | Small stone axe | " |
| 33. | Small discoidal stone | " |
| 34. | " | " |
| 35. | " | " |
| 36. | Discoidal stone, $2\frac{1}{4}$ in. dia., with hole in centre. | David Melville. |
| 37. | Clay pipe. | David Melville. |
| 38. | " | " |
| 39. | " | " |
| 40. | " | " |
| 41. | " | " |
| 42. | Pipe stems | " |
- All those from No. 8 to No. 42 are from Nottawasaga Tp.
43. Small discoidal stone, with hole in centre and groove round outer edge.
York Tp. Jos. Smelser.

CASE A2.

MISCELLANEOUS.

1. Pipe head. Lambton Mills. Wardie and Ottie White.
2. " broken. Lambton Mills. W. and O. White.
3. String of glass beads. " " " "
4. " and shell beads. Lambton Mills. W. and O. White.
5. Pipe-stem. Lambton Mills. W. and O. White.
6. Bear's tooth (bored). Lambton Mills. W. and O. White.
7. Diagonally notched bone. " " " "
8. Carved fragment of bone, (probably of European origin). Lambton Mills. W. and O. White.
9. Small hollowed stone. Lambton Mills. W. and O. White.
10. Two broken shell beads. Lougheed col.
11. Small, flat stone, perforated. "
12. Stone in preparation for beads. "
13. Bear's tooth (notched). Lougheed col.
14. Stone axe. Sebastopol Tp. Alex. Parks.
15. Gouge. Golden Lake, Algona Tp. Alex. Parks.
16. Stone axe. Brantford. P. R. Jarvis.
17. " N. Easthope. "
18. " Ellice Tp. "
19. " " "
20. " N. Easthope. "
21. " (grooved). Ellice Tp. P. R. Jarvis.
22. Gouge. P. R. Jarvis.
23. Belt ornament, sheet copper. P. R. Jarvis.
24. Pottery fragments. Delaware Tp. P. R. Jarvis.
25. Shell ornaments (2). P. R. Jarvis.
26. Clay pipe. Zorra Tp. "
27. " " "
28. " " "
29. Red stone bead. Saugeen. P. R. Jarvis.
30. Spoon; Sioux (buffalo horn). "
31. Bone chisel. Near Battleford, N. W. T. Major J. M. Delamere.
32. Pipe from grave near Stony Lake, N. W. T. Major J. M. Delamere.
33. Copper kettle. North-west of Battleford, N. W. T. "
34. Slate $5\frac{3}{8}$ in. long, 4 in. wide, and $1\frac{3}{8}$ in. at thickest. Oval hole (long dia. 1 in.) in middle, from side to side. Outline much like the McCallum pipe, and suggestive of a monkey. May have been intended for a large pipe. Nottawasaga, Angus Buie.
35. Fragment of stone pipe; head showing a fairly well cut human face $\frac{3}{8}$ in. long, above and behind which is a dog's head neatly cut. The latter is only half an inch long, and about the same breadth across the forehead, but the eyes, ears, mouth and nostrils are imitated. Nottawasaga. Angus Buie.

36. Pipe-head (snake) somewhat like No. 90 in case S. Nottawasaga. Angus Buie.

37. Human head from pipe-head. Nottawasaga.

38. Plain clay pipe. Ellice Tp.

39. Small pipe, like modern N. W. type. Nottawasaga. Angus Buie.

This case contains also 47 flints from various places in Perth Co.

All the articles in cases Z and A2 are placed there only temporarily, until a re-arrangement of specimens in other cases will afford room for them.

WALL CASE 1.

POTTERY.

1. Small cup, edges broken. Beverly Tp. Dwyer collection.
2. Small cup, almost perfect. Beverly Tp. Dwyer collection.
3. Plain vessel, moulded in grass basket. Humberstone. Cyrenius Bearss.
4. Small spoon-like specimen. Nottawasaga. Lougheed collection.
- 5 to 42. Very fine specimens of clay vessels, entire or nearly so from mounds in Arkansas. From the collection of C. W. Riggs, Cincinnati.
43. Small and imperfect cup. York Tp. Dr. R. Orr, Maple.

WALL CASE 2.

- 1 to 13. Iron tomahawks from various localities.
 14. Copper kettle. Algona Tp., Renfrew Co.
 15. *Pyrula perversa* from ossuary. Penetanguishene.
 16. *Pyrula perversa*. No locality.
 17. *Pyrula perversa* from ossuary on Cape Hurd.
 18. *Pyrula perversa* from ossuary in Humberstone Tp. Mrs. Barney, sr.
 19. *Pyrula perversa* from ossuary in Nottawasaga. Angus Buie.
 20. *Pyrula perversa* from ossuary in Nottawasaga. Angus Buie.
 21. Wooden war club, modern.
 22. Wooden war club, made to represent a hand grasping a ball, modern.
 - 23 to 34. Iron tomahawks of various patterns and from various localities.
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 WALL CASE 3.

CRANIA.

1 to 55. From ossuary, on the Keffer farm. Vaughan Tp.

 WALL CASE 4.

CRANIA.

1 and 2. No record.

3. Withrow Avenue, Toronto. E. A. Macdonald.

4. Beverly Tp. Dwyer col.

5 and 6. Withrow Avenue, Toronto. E. A. Macdonald.

7 to 12. Humberstone Tp.

13 to 28. Nottawasaga Tp.

19 and 20. Withrow Avenue, Toronto.

21. Upper half containing portions of beaver skin and pieces of cedar bark, Beverly Tp.

22. Withrow Avenue, Toronto.

23 to 32. Ridley and Bury farm, Clearville, Orford Tp.

33. South Bay, Manitoulin Island. R. Baskerville, Manitowaning.

 WALL CASE 5.

Contains nearly 400 stone axes and chisels of various dimensions, from two inches to upwards of one foot in length, also 14 iron tomahawks.

WALL CASE 6.

Contains about 1,000 arrow and spear heads from different parts of Canada and the United States.

Six iron tomahawks.

A large number of pottery fragments from Miller's farm, York Tp., and a quantity of miscellaneous material.

MORTARS OR MILLS.

1. Victoria Co. Dickson col.
2. York Tp. S.
3. Vaughan Tp. Dr. Orr, Maple.
4. York Tp. contains four cavities.

MODERN SPECIMENS.

Blood Indian. N. W. Territory.

- 1 Leather belt, beaded.
- 1 Pair woman's leggings, beaded.
- 1 " man's leggings, beaded.
- 2 " large breast buttons; beaded.
- 4 Paint bags, one containing paint, beaded.
- 1 Pair large moccasins, beaded.
- 1 " child's " "
- 1 Tom-tom.
- 1 Large wooden pipe stem, plain.
- 1 " " beaded.
- 1 Kooie stick; handle beaded.
- 1 Hammer; long handle, beaded.
- 1 Whip; handle beaded.
- 1 "Medicine" bag of buffalo hide.
- 1 Hunting knife.
- 1 Leather cartridge pouch.
- 1 Scalp, with lock of hair.
- 3 " locks.
- 1 Fire-steel attached to thong.
- 1 Signal hand-glass in richly beaded bag.

These were presented by Rev. John McLean, M.A., Ph. D., Moosejaw, N. W. T.

Arouay Indian. British Guiana.

- 1 Man's head-dress.
- 1 Wooden club.
- 1 Blow-gun.

- 1 Bundle of small arrows or darts for use in the blow-gun.
- 1 Bow.
- 1 Bundle of arrows.
- 1 Fan.
- 2 Spears.
- 1 Woman's dress.

These were presented by Mr. M. M. Fenwick, B.A., Head Master, High School, Bowmanville.

WALL CASE 7.

ESKIMO.

- 1. Skin of harp-seal.
 - 1. Child's coat, fur.
 - 3. " trousers, fur.
 - 4. Pair of mitts, fur.
 - 5. " shoes "
 - 6. " boots "
 - 7. Man's coat, "
 - 8. Woman's coat, "
 - 9. Man's coat with hood, fur.
 - 10. Bed, fur.
- On wall—
- 11. Snow shovel; wood and bone.
 - 12. Snow stick.
 - 13. Walrus spear.
 - 14. Whale line.
 - 15-16. 2 seal lines.
 - 17. Model of kayak.
 - 18. " " " frame.

These were presented by Mr. F. F. Payne, of the Meteorological Observatory, Toronto.

- 19. Model of Kayak. Mr. John Notman, Toronto.

CARIB.

From Nevis, St. Kitts, Barbados and other West Indian Islands.

- 1 Stone club head.
- 1 " celt or axe.
- 4 " pestles.
- 1 Shell celt.
- 2 " gouges.

These were presented by Mr. Connell, of Nevis, W. I.

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General description of sacrifice of white dog by the Canadian Onondagas. Description of preparation and adorning the dog, p. 86. See Indian, the.

—A Ceremonial Ornament. *The Indian, Vol. I.*, No. 5 (March 17, 1886), p. 49.

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Describes flight Hurons (after attack of Iroquois in 1649) to the Island of Ahoendoe (Christin Island) in Georgian Bay, and the relics found there. Ruins of fort, stone enclosures, pottery, etc.

cutl—[Villages and Ossuaries of the Huron country]. *Archæological Report*. Report of Canadian Institute, Session 1886-7, Toronto, 1888, pp. 57-58. General description and enumeration of Huron village sites in Simcoe County, 57; description of ossuaries and remains found therein, 58.

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c HUART, L'ABBÉ.—L'Age de Pierre au Saguenay, *Le Naturaliste Canadien* Tome XVII. (1886-7), pp. 86-91.

Describes stone relics of Saguenay Valley, Province of Quebec.

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[Short note on discovery of bones of an Indian, with Queen Ann musket, kettle, etc., on farm of R. Kennedy, 7th concession, London]. *Ib.* p. 82.

Sacrifice of White Dog (continued). No. 8 (April 28, 1886) pp. 86-87; No. 9 (May 12, 1886), p. 98-99. Describes sacrifice as carried on by the Canadian Onondagas.

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Chap. V. (pp. 70-), mode of life, wigwams, ancient domestic implements, mode of travelling, dress; mode of burying the dead (98-100); weapons of war (131-132); amusements (134-135); wampum (139-140). The following plates accompany the work: opp. p. 73, plate containing figures of pottery and pipes; p. 83 and p. 85, idols; p. 99, Muncney graves; 131, weapons; 135, drums, rattles, etc.; 145, implements of medicine men.

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Description, p. 93, of yurts of stone on Melville and Banks Island; p. 94, general notice of Eskimo remains on Melville, Bathurst and Cornwall Islands; p. 95, remains on Wellington Channel, Griffith Island, Prince of Wales Island, N. Somerset, N. Devon, etc.

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List and description of different varieties of throwing-sticks in use amongst the Eskimo; amongst other, at Ungava Bay, Baffin Bay, Anderson River, etc.

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c ———The Beginnings of the Carrying Industry. American Anthropologist, Vol. II. (Washington, 1889), pp. 21-46.

Contains (p. 29) figure of hand-basket of Micmac Indians of Nova Scotia. See also Smithsonian Annual Report, 1884 (II., fig. 96).

u MAYNE, COMMANDER R. C. R.N., F.R.G.S.—Four Years in British Columbia. London, 1862, pp. XI., 468.

Chapter XI. (pp. 242-304), Aborigines of British Columbia. Pp. 253-254, clam-cooking; 254-5, fish-grease maki g; 258, carving and painting; 271-2, sepulture (with plate); 281-283, facial and other ornaments; 283-284, clothing, canoes, etc.

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Gives interesting accounts of wampum, pp. 16-20; Indian burial customs, 29-36; the peace-pipe, 54-57; Indian charms, 70-73; picture-writing, 90-94; iron-stone idol, 201-203.

cu MERCER, MAJOR.—Catalogue of a few remarkable coincidences which induce a belief of the Asiatic origin of the North American Indians. Trans. Lit. and Hist. Soc. of Quebec. Vol. II. (1829), pp. 240-

General enumeration of resemblances in customs, arts, dwellings, implements, weapons.

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c MILLER, PETER, F.S.A. Scot.—Notice of Three Micmac Flint Arrow-heads from Merigomish Harbour on the northern coast of Nova Scotia, now presented to the museum. Proc. Soc. of Antiq. of Scotland, Vol. IX., N. S. 1886-7 (Edinburgh, 1887), pp. 212-214.

Describes arrow-heads from Merigomish Harbour, Pictou county, N. S. Description (p. 212) of camping ground; p. 213-4, quotation from Paterson's (*q. v.*) History of Pictou County, describing skull' stone axes, arrow-heads, etc., plowed up by Mr. Donald McGregor of Big Island, and description of ancient burial site.

cut "NATURE." London, Vol. XXXIX (1889), p. 545.

Brief note on paper of Dr. F. Boas on "The Houses of the Kwakiutl Indians of British Columbia" (U. S. National Museum).

l MONTGOMERY, PROF. HENRY, Ph. D.—Indian Remains in Simcoe and Muskoka. Toronto *Globe*, August 3rd, 1888. [Title and description from H. F. Hunter, B.A.]

Treats of Huron ossuaries, burial pits, village sites, pottery, etc., in Medonte, Simcoe county, and supposed inscribed rock in Muskoka.

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ct PACKARD, A. S.—Notes on the Labrador Eskimo and their former range southward. Amer. Naturalist, Vol. XIX. (1885), pp. 471-481.

t PATERSON, REV. GEO., D.D.—The History of Pictou County, Nova Scotia. 1877.

Contains a sketch of the Archaeology of Pictou county. See Miller, Peter.

———Nova Scotia Archæology. The Stone Age. The Paterson Collection Dalhousie Gazette (Dalhousie College), Vol. XXI, No. 7. Halifax, Feb. 21, 1889.

Description of the Paterson collection of stone, implements, etc., in the museum of Dalhousie college.

PETTITOT, ÉMILE.—Sur quelques armes de pierre rapportées d'Amérique, avec atlas par l'auteur. Dans les *Matériaux*, d'Émile Cartailhac. Toulouse, 1875. [Title from Petitot's "Quinze Ans sous le Cercle Polaire."]

a ———Vocabulaire français-esquimaux, dialecte de Tchiglit des bouches du Mackenzie et de L'Anderson, précédé d'une monographie de cette tribu et de notes grammaticales. Paris, 1876. 1-LXIV, 1-78, 4to.

The "Monographie" (IX.-XXXVI) contains some items of archaeological interest.

* ———Quinze Ans sous le Cercle Polaire. Mackenzie, Anderson, Youkon-Paris, 1889. Pp. IV-XVI, 1-322.

Notices burial of Déné, 123; Dindjié yourts, 181; Déné hut, 217; opp. p. 190 is a full page illustration of a Dindjié camp, and opp. p. 202 a full page illustration of a group of Déné on a winter voyage; opp. p. 217 is a full page illustration of the interior of a Déné hut with its occupants.

cu ———On the Athapasca district of the Canadian N. W. T. Canad. Record of Science, Vol. I. (1884-5). [Article reprinted from Proc. Roy. Geog. Soc. Lond., Nov. 1885.]

Pp. 46-53 taken up with a general description of the Indian tribes of that region.

* ———En Route pour la Mer Glaciale. Paris. Pp. 394.

* ———Les Grands Esquimaux. Paris, 1887. Pp. VI, 307.

Describes Eskimo sledges, p. 11; Eskimo pipes, 13; Eskimo huts, 49-52; Eskimo dances, 153-157; tents, 170; nets, 206. It contains a map of the region in question, besides seven plates, the chief of which are: Portrait of the chief of the Liverpool Bay Eskimo (facing p. 78); Eskimo village at mouth of Anderson River, 138; interior of an *igloo*, 192; Eskimo dance, 248; Eskimo camp, 299.

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cu PHILLIPS, HENRY, JR.—On a supposed Runic Inscription at Yarmouth, Nova Scotia. Proc. Amer. Philos. Soc. Philadelphia. Vol. XXI, (1883-4), pp. 491-2, with plate on p. 490.

c QUESNEL, LEO.—Les Esquimaux, d'après M. Petitot. Revue Scientifique. Tome XLII, 3 e Série, 8e Année (1888), pp. 670-674.

Describes (p. 671) construction of an igloo. See Petitot Émile.

cu RAE, DR. JNO.—Eskimo Skulls. Journ. Anthropol. Instit. of Gr. Brit. and Ireland, Vol. VII. (1877-8).

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c REVUE CANADIENNE. Québec. February, 1875, pp. 108-109.

Describes Indian dress, feasts, burial, etc.

cu ROSS, BERNARD R.—An Account of the Botanical and Mineral Products useful to the Chepewyan tribe of Indians inhabiting the McKenzie River Dist., etc. Canad. Naturalist and Geologist and Proc. of the Nat. Soc. of Montreal. Vol. VII. (1862), pp. 133-137.

u SAGARD [THEODAT], F. GABRIEL.—Le grand Voyage au Pays des Hurons situé en l'Amérique vers la mer douce, es dernières confins de la Nouvelle France dite Canada, avec un dictionnaire de la langue Huronne, etc. A Paris, 1632. Nouvelle Edition. Publiée par M. Émile Chevalier. Paris, Librairie Tross, 1865. Deux Tomes, pp. 1-268 (orig. paging, 1-380.)

Describes Canots (canoes), p. 89 (129); vessels of bark, 91 (132); cradles, 118 (170); chapelets, 135-136 (194-5); burials, 199 (285), 200 (287); birch-bark drawing, 245 (348), 246 (349); De la grande feste des Morts, 203-206 (291-295).

cu SCHULTZ, DR. M.P.—The Mound Builders of the West. Canadian Naturalist and Geologist, etc. Vol. IX. (1881), pp. 60-62.

Describes mounds and contents (skeletons, shells, ornaments), in Lisgar County, Manitoba.

tu SCHWATKA, FREDERICK.—Along Alaska's Great River. New York, 1885. Pp. 360.

Describes pp. 216-220, Ayan grave, near old Fort Selkirk, with full page illustration on p. 217; Ayan or Iyan paddle, p. 220; Ayan and Chilkat gambling tools, with figure on p. 227; dress and ornaments, 228; house and household implements, 230; Ayan moose-arrow, 230-232, with arrow figure on p. 231; knives, 232; winter-tent, 232-3; carved pius for fastening marmot snares, 152; ruins of old Fort Selkirk. 205.

tu SKIDMORE, E. RUHAMAH.—Alaska, its southern coast and the Sitkan Archipelago. Boston, 1885, pp. 333.

Pages 36-45 treat of the Haidahs. Houses and canoes of the Kasa-an (Haidah) Indians, 36-37; figures of three carved spoons and Shaman's rattle, 38; Haidah carvings and ornaments, 38-39; Shaman's totems, 41-42; figure of Kasa-an pipe, 268; totem-poles, 272-273; chief's residence at Kajan, figure, 274; Haidah canoes, 275; halibut-hook, 276; carving, 275-7.

ctu "SCIENCE." New York. Vol. IV. (1884), pp. 316-320.

Brief abstracts of papers read at Montreal meeting of the British Assoc. for Adv. of Science.

Change of Eskimo in space and time—Dawkins—316-317.

Huron Iroquois as typical race of Amer. Aborigines—Wilson—318.

Anthropological Discoveries in Canada—Hirschfelder—318.

Origin of Wampum—Hale—320.

tuc—Vol. VII. (1886), p. 186.

Brief note on exploration of mounds in Manitoba.

"It appears from surveys made during the past summer that the northern limits of the Mound-Builders lie beyond the Red River of the north."

ctu——Vol. IX. (1887), pp. 606-7. Ethnological notes. The Serpent among the North-west American Indians.

Contains (p. 606) figure of dancing implement representing the Sisiutl.
See American Antiquarian.

SCHOOLCRAFT, H. R.—Onéota.

Notices (p. 326), earthworks near Dundas, Ontario.

SCHOOLCRAFT, H. R.—The Indian in his Wigwam or Characteristics of the Red Race of America. New York, W. H. Graham, Tribune Buildings, 1847.

Pp. 324-327 contain a letter, dated from Dundas, Canada West, Oct. 26, 1843, giving an account of a visit to an ossuary in Beverley township. [Title and description from the Rev. W. M. Beauchamp, of Baldwinsville, N. Y.]

c SCOTTISH GEOGRAPHICAL MAGAZINE, THE. Vol. V. (1889), pp. 191-198. The Eskimo Tribes.

A review of "The Eskimo of Tribes; their Distribution and characteristics especially in regard to language," by Dr. H. Rink (Vol. XI. of the Meddelelse on Groenland, Copenhagen, (1887). Treats of implements, pp. (192-193), dwellings, 193-194; dress and ornaments, 194; domestic industries and arts, 194-5; religion and folk-lore, 195; social organisation, 195-7; distribution and division, 197-198.

u SCOULEK, JNO. M.D., F.L.S.—On the Indian Tribes inhabiting the N. W. coast of America. Ethnol. Journ. Journ. of the Ethnol. Soc. of London. Vol. I. (1848), pp. 228-252.

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Describes (p. 59) Cree calumet pattern on Skin Robe; p. 258, Assiniboine Pipe and stem, with figure; p. 261, Assiniboine knife-sheath and fire-bag.

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u SQUIER, E.G., M.A.—Antiquities of the State of New York, being the results of extensive original surveys and explorations, with a supplement on the Antiquities of the West, Buffalo, 1851.

Notices (pp. 15-16), remains found on Canadian side opposite Morrisville by Dr. Reynolds (*q. v.*); p. 16, figure of terra-cotta mask found there. Pages 100-107 treat of ossuaries, etc., in Simcoe County, Ontario, after Bawtree (*q. v.*). P. 100, human bones, etc., discovered near Barrie in 1846, ossuary near St. Vincent; 100-103, ossuary near Penetanguishene in Township of Giny (read *Tiny*) examined in 1847, from which skulls, 26 kettles of copper and brass, 3 large conch-shells, piece of beaver skin, large iron axe, human hair, copper bracelet, beads, etc., were taken, description of pit, p. 101, kettles 100-102 (figure on page 102), conch-shells 102 (figure on 102), axe, with figure, 102, pipe 102-103, beads 103. Pages 103-104 describe another pit (2 miles from above), and contents; 104-105, a pit discovered in Oro township in November, 1847, in which several hundred skeletons, 26 kettles, one conch-shell, one iron axe, a number of flat perforated shell-beads and pipe were found. Pages 105-6 describe a pit in the Township of Giny (*Tiny*), from which a large number of skeletons, 16 conch shells, a stone and a clay pipe, copper bracelets, and ear-ornaments, red-pipestone beads, and copper arrowheads were taken. Pages 106-108 deal with a fifth pit in the centre of the Town of *Tiny*, with figure and plan opposite page 107. P. 108 notices a burial place on Isle Ronde, near the extremity of L. Huron, and one near Hamilton, Ont. Pages 108-110 contain quotation from Charlevoix (II, 194), on the *Fête des Morts* among the Hurons and Iroquois. On p. 142, and p. 267, are brief references to earthworks in Canada.

l STONE, WM. L.—Orderly Book of Sir John Johnson during the Oriskany Campaign, 1776-1777. Albany, 1882.

A note on page 68 describes a large Indian burial-ground on the shore of Button Bay, Wolfe Island, discovered in 1878, by reason of the washing away of the shore. Find of large spears, arrowheads and skulls (encased in mica). Also a mound covering skeletons.

THOMAS, MISS NORA.—Burial Ceremonies of the Hurons. Translated from the Relations des Jésuites, 1636, pp. 128-139. Supplemental Note to "Burial Mounds of the Northern Section of the United States," by Prof. Cyrus Thomas in Fifth Annual Report of the Bureau of Ethnology, 1883-1884 (Washington, 1887), pp. 3-139.

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Describes from Hind (Vol. I p. 150), rude form of sun-dial employed by the Nascapce Indians.

TORONTO "MAIL." Vol. XVIII, No. 7,913. (February 27, 1889), p. 4, col. 6. Description [from the St. John (N.B.) Educational Review] of Pictographs on the Fairy rocks, between Annapolis and Queen's County.

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c ———Scraper of the Naskopie (Naynaynots) Indians. American Anthropologist, Washington. Vol. I. (1888), pp. 186-188.

Describes a bone-scraper of the Nascopies and method of making and manner of using it.

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u VIRCHOW, HERR.—Die anthropologische Untersuchung der Bella-Coola. Zeitschrift für Ethnologie, 18. Bd. (1886), S. 206-215.

Treats of dance-masks, 208; houses and totem-poles, 208; wood-carving, 208; tattooing and scarring, 210-211; physical characteristics, 212-215, and table of measurements of body and skull of Bella-Coola.

l WELD, ISAAC, JR.—Travels through the States of North America and the Provinces of Upper and Lower Canada during the years 1795, 1796 and 1797. Fourth edition. Illustrated and embellished with 16 plates. London, 1807, 2 vols., I-VIII, 1-376.

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c WEST, JOHN, A.M.—The Substance of a Journal during a residence at the Red River Colony, British North America and frequent excursions among the North-west American Indians, in the years 1821, 1822, 1823. Second Edition enlarged with a journal of a mission to the Indians of New Brunswick and Nova Scotia and the Mohawks on the Ouse or Grand River, Upper Canada, 1825-1826. London, 1827, I-XVI, 1-326.

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Describes (p. 74) masks used by the Aht Indians of Vancouver Islands with figure of the mask on page 77.

u WILSON, CAPTAIN.—Report on the Indian Tribes inhabiting the country in the vicinity of the 49th parallel of N. Latitude. Ethnol. Journ. Journ. of the Ethnol. Soc. of London. Vol. IV. (1865), pp. 275-332.

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REMARKS.

The present contribution contains some 160 titles (the first contribution contained 74) and the compiler hopes, with about three more, to make the Bibliography fairly complete. The Relation, of the Jesuits, works like those of Charlevoix, Lafitau, etc., will be cited in the next section, as will also the mass of books of travel relating to the Arctic coast of British America (some of which will be found in the present section), together with local histories and fugitive articles in newspapers and periodicals.

 *C, l, t, u*, before a title mean that the work from which the title and description have been taken, is to be found in the Library of the Canadian Institute (*c*), the Library of the Ontario Legislature (*l*), the Toronto Public Library (*t*), or the Library of the University of Toronto (*u*). A work marked by an asterisk (*) is cited from a copy in the possession of the compiler.

CORRIGENDA.

Corrigenda in No. I. (Report, 1887-188). P. 6, l. 27, read Sœur Ste Héïène. P. 6, line 8, read 2 vols.; p. 3, l. 41, read Aborigènes.

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