(From the Summary Report of the Geological Survey, Canada, for the calendar year 1912)

Reports from Anthropological Division

ANTHROPOLOGICAL DIVISION.

PART I.

ETHNOLOGY AND LINGUISTICS.

(*E. Sapir*).

Museum.

In the course of the year the exhibition hall of the Division of Anthropology has been provided with glass cases for exhibition purposes. Of these, thirty cases of 6 foot unit length (eighteen upright cases and twelve table cases) and five upright cases of double length have been set aside for exhibition of ethnological material, while eight table cases of unit length are to be utilized for the exhibition of archæological objects. Four wall cases and two upright cases intended to be placed in the corner alcoves of the hall have been ordered, but are still outstanding. In planning the selection of specimens that are to make up the regular ethnological exhibit, it soon became evident that the space allotted was too small for the adequate representation of the five main aboriginal culture areas of Canada, and it was decided to limit the hall to three of these ethnological areas (Eastern Woodlands, Eskimo, and West Coast), besides a synoptic survey of the archæology of the Dominion. The need for another exhibition hall to be devoted to the uses of the Division of Anthropology is urgent, as provision should be made for an exhibit of representative collections from the Plains and Plateau-Mackenzie areas, material from which it is expected will be coming in in increasing quantities. The first step taken in the preparing of a public exhibit was the suspending of the long Haida war canoe from the ceiling of the anthropological hall. It is intended, in the course of the next calendar year, to suspend in similar manner the heavier of the smaller canoes, which are to be placed near the walls of the hall. The exhibits representing the three culture areas referred to will be installed in the course of the year 1913 and systematic labels will be prepared to accompany them. Of the three large totem poles now owned by the museum, two (from Bellakula and from Massett, Queen Charlotte islands) have been placed at the entrance to the building; the third, a particularly high one from Skidegate, Queen Charlotte islands, has not yet been placed, and would be best provided for in a high hall which might at the same time provide for exhibits of Plains and Plateau-Mackenzie material.

Thus far the museum work of the scientific staff of the Division of Anthropology has been seriously hampered by the lack of a regular preparator or technical assistant, as the purely scientific and office work of the staff makes it difficult for them to do full justice to the proper care of museum material. The necessity for an anthropological preparator, whose duty it would be to treat (clean, fumigate, and poison), sort out, number, catalogue, store, and keep in constant good care the ever increasing anthropological collections of the museum, is imperative. Provision might also well be made for a skilful mechanic for the division, who could be employed to repair or reconstruct material in poor or fragmentary condition, prepare models and groups illustrating various phases in the life of the natives, and do such other technical work as might be required.

Museum Specimens.—Over 1,500 ethnological objects have been added in the course of the year to the collections of the museum. These were obtained either

by gift, by purchase in the course of regular field work for the division, by members of the Geological Survey not connected with the Division of Anthropology, and by purchase of material not directly obtained in connexion with field work. There have been obtained as gifts:—

From C. D. Melvill and J. Hornby, of Edmonton, Alberta, 30 ethnological specimens of the Pallirmiut Eskimo of Coppermine river.

From C. W. Drysdale, of the Geological Survey, wooden fragment from Spatsum, B.C.

Material was obtained in the course of regular field work for the Survey as follows:—

By E. Sapir—
26 Algonquin specimens from Maniwaki, Que.

By C. M. Barbeau—
140 Iroquois specimens, from Seneca Reservation, Oklahoma
71 Wyandot specimens, from Wyandotte and Seneca Reservations, Oklahoma
7 Wyandot specimens, from Amherstburg, Ont.
37 Huron specimens, from Lorette, Que.
4 Ojibwa specimens, from Amherstburg, Ont.

By W. H. Mechling—
2 Malecite specimens, from New Brunswick
5 Micmac specimens, from New Brunswick

By F. W. Waugh—
327 Iroquois specimens, from Iroquois reserves in Ontario, Quebec, and New York State
12 Ojibwa specimens, from the Chippewas of the Thames, Ont.

By A. A. Goldenweiser—
9 Iroquois specimens, from Six Nations Reserve, Ont.

By P. Radin—
1 Iroquois specimen, from Manitoulin island, Ont.
4 Ojibwa specimens, from Manitoulin island, Ont.

By J. A. Teit—
About 30 Tahltan specimens, from Upper Stikine river

Ethnological specimens purchased in course of field work by members of the Geological Survey not connected with the Division of Anthropology are:—

By W. Leach, 1 pair of Stoney moccasins, from Morley, Alberta
By D. D. Cairnes, 12 Athabaskan specimens, from Yukon territory

Ethnological specimens that were purchased not immediately in connexion with field work are:—

From F. G. Speck, Philadelphia, Pa.—
377 Montagnais specimens from Lake St. John, Seven Islands, and Moisie, Que.
5 Naskapi specimens from Moisie, Que.
33 Abenaki specimens from Lake George and Adirondack mountains, N.Y.
31 Penobscot specimens from Oldtown, Maine
3 Huron specimens from Lorette, Que.
16 Eskimo specimens (Labrador, Baffin Land, and Alaska)
2 Tlingit specimens from Alaska
3 Têtes de Boule specimens from St. Maurice river, Que.

5 miscellaneous specimens (Cree, Nanticoke, Mohegan, and Pamunkey)
From Chief John Gibson, Six Nations Reserve, Ont.—
83 Iroquois specimens
From A. B. Reagan, Nett L., Minn.—
113 Ojibwa specimens from Bois Fort Reservation, Minn.
9 Quileute specimens from Lapush, Wash.
From Chief James Paul, St. Mary, N.B.—
13 Malecite specimens
From Mrs. C. Michel, River Desert Reserve, Que.—
69 Algonquin specimens
From Mrs. M. Thompson, Hull, Que.—
2 Iroquois specimens
From Nicolas and Caroline Groslouis, Lorette, Que.—
15 Huron specimens
From R. S. Kariho, Roswell, New Mexico—
9 Wyandot specimens from Oklahoma
From Miss N. Dawson, Wyandotte, Okla.—
4 Wyandot specimens from Wyandotte Reservation, Okla.
From John Lewis, Brinsley, Ont.—
3 Ojibwa specimens from region of Lake of the Woods

The greater part of the ethnological museum material obtained is thus from the Iroquoian (Iroquois proper, Wyandot, Huron) and Algonkian (Montagnais, Ojibwa, Algonquin, Abenaki, Penobscot) tribes of the Eastern Woodlands area. The parts of Canada that at present most sadly need representation in the Anthropological Division of the museum are the Plains, Western Plateaus, and Mackenzie valley. Part of the Eskimo material recently acquired by Mr. V. Stefánsson from the Eskimo of Coronation gulf and adjoining regions is designed to be turned over to this museum, but the material has not yet been received.

Photographic Work.—Photographs of ethnological interest have been received by the Division of Anthropology during the course of the year, partly by gift, and partly as a result of field work undertaken by the division. A complete set of prints is filed with the Anthropological Division. The gifts are as follows:—

From University of Pennsylvania, Philadelphia—
116 Montagnais photographs from Lake St. John, Que.
119 Penobscot photographs from Oldtown, Maine
22 Micmac photographs
2 Huron photographs from Lorette, Que.
From F. G. Speck, Philadelphia, Pa.—
128 Montagnais photographs from Lake St. John, Seven Islands, and Moisie, Que.
14 Penobscot photographs from Oldtown, Maine
2 Micmac photographs
6 Wyandot photographs
From C. D. Melville, Edmonton, Alberta—
8 Coppermine River Eskimo photographs
9 Dogrib photographs
From Stephen Retasket, Lillooet, of Lillooet, B.C.—
24 Lillooet photographs
From Mary Logan, Seneca-Wyandot, of Oklahoma—
2 Wyandot and 2 Iroquois photographs
From Catherine Johnson, Wyandot of Oklahoma—
1 Wyandot photograph

From Mary Turkey, Wyandot of Oklahoma—
11 Wyandot photographs
From A. B. Reagan, Nett L., Minn.—
1 Ojibwa photograph

Ethnological photographs taken by members of the anthropological staff in the field or at the museum, and by the Photographic Division of the Geological Survey are as follows:—

By C. M. Barbeau—
185 Wyandot photographs, chiefly from Wyandotte Reservation, Oklahoma
188 Iroquois photographs, chiefly from Seneca Reservation, Oklahoma
7 Interior Salish (Okanagan, Thompson River, Shuswap, Lillooet) photographs
1 Ottawa photograph, Wyandotte Reservation, Okla.
By F. W. Waugh—
108 Iroquois photographs from Iroquois reserves in Ontario, Quebec, and New York state
By F. H. S. Knowles—
21 Iroquois photographs, Six Nations Reserve, Ontario
By Photographic Division, Geological Survey—
7 Malecite and Micmac photographs
49 Interior Salish (Okanagan, Thompson River, Shuswap, Lillooet) photographs

From these photographs seven lantern slides have been made and added to the stock kept by the division for lecture purposes. Of these, four are Huron and Iroquois, and three Interior Salish (Thompson River, Shuswap, Lillooet).

Phonograph Records.—The recording of aboriginal music, begun from the very start of the research work of the division, has been continued throughout the year. The following records have been made by members of the permanent and field staffs and deposited in the museum:—

By C. M. Barbeau—
103 Iroquois (Cayuga-Seneca) records from Seneca Reservation, Oklahoma, embracing 231 songs and 5 speeches and prayers
32 Wyandot records from Wyandotte Reservation, Oklahoma, embracing 40 songs and 6 language records
5 Shawnee records from Wyandot Reservation, Okla., embracing 6 songs
41 Interior Salish (Thompson river, Shuswap, Lillooet) records taken in Ottawa, embracing 37 songs and 2 speeches
By A. A. Goldenweiser—
40 Iroquois records from Six Nations Reserve, Ont., embracing 74 songs
By E. Sapir—
3 records from Chief John Gibson, Seneca of Six Nations Reserve, Ont., taken in Ottawa, embracing 6 songs
2 Ojibwa language records, taken in Ottawa from Edwin Maness, Ojibwa of Sarnia Reserve, Ont.
By J. A. Teit—
61 Tahltan songs from Upper Stikine river

Of this phonographic material, Mr. Barbeau's 231 Iroquois songs and 6 Shawnee songs have been transcribed into notes by J. D. Sapir, and are thus better available for study in connexion with ethnological research.

Field Work and Research.

Ethnological research work in the field has been diligently prosecuted during the year. Besides the field research undertaken by Mr. C. M. Barbeau, of the permanent staff, the services were procured also of Dr. A. A. Goldenweiser, Mr. F. W. Waugh, Mr. W. H. Mechling, Dr. P. Radin, and Mr. J. A. Teit. Mr. Barbeau spent about four months in Oklahoma and at Amherstburg, Ontario, in continuation of his Wyandot ethnological and linguistic work of the preceding year. Dr. Goldenweiser continued his field research on Iroquois social organization and religion, spending about three and a half months at Six Nations Reserve, Ontario, for this purpose. Mr. Waugh undertook an elaborate investigation of the material culture of the Iroquois Indians, visiting Six Nations Reserve and Oneidatown in Ontario, Caughnawaga in Quebec, and Tonawanda and Onondaga Castle in New York state, and devoting an aggregate of nearly eight months in the field. Mr. Mechling continued ethnological research among the Malecite of New Brunswick, devoting an aggregate of two months in the field to the work. Dr. Radin undertook the study of the Canadian Ojibwa on the side of social organization, mythology, religion, and language, visiting several reserves in Ontario, and spending five months in the field. Mr. Teit began what is expected to be a thorough reconnaissance of the comparatively little known Athabaskan tribes of the Western Plateaus by spending a little over two months among the Tahltan Indians of the Upper Stikine region, B.C. In the early part of the year Mr. Teit visited Ottawa as spokesman of a delegation of Interior Salish chiefs who had come on administrative business. The opportunity was taken by Mr. Barbeau to secure photographs and phonograph records from a number of these, and to make a study of a special phase of the social and religious life of the Thompson River and Lillooet Indians. Reports of these various lines of research work are appended. Mr. V. Stefánsson returned during the year from his four years' exploratory and ethnological trip in the Arctic north; a general account of the ethnological results of the expedition is appended. A short trip for the purpose of collecting Algonquin museum material was made by myself among the Algonquin Indians living near Maniwaki, Quebec.

Manuscripts.—Manuscript material of ethnological interest was obtained during the year, partly by gift, partly by purchase. The gifts embrace:—

C. D. Melvill—

Notes on the Coppermine River Eskimo and their neighbours, manuscript of 7 pages

The manuscript material purchased embraces:—

A. B. Reagan—

Material on Ojibwa names, mythology, birch bark drawings with explanation of symbolism, and drawings of petroglyphs on Picture island, Bois Fort Reservation, Minn.

Manuscript and figures on Ojibwa and Quileute games

Manuscript and figures (including birch-bark drawing) of Ojibwa Ogechedah dance

L. L. Thompson, Iroquois of Lake of Two Mountains, residing at Hull, Que.—

590 pages of Mohawk text, chiefly folk-lore, written down by himself

Though not strictly applying to this year, mention should be made of the gift in 1911 by Dr. F. Boas, of Columbia University, of valuable manuscript material on the Nootka Indians. This material embraces linguistic notes collected by Dr. Boas years ago for the British Association for the Advancement of Science and only in part published in their reports; 5 pages of data on the Nootka Whaling Ritual, obtained for Dr. Boas by George Hunt; and, most important of all, 333 pages of mythological manuscript obtained by George Hunt from the Nootka Indians of Nootka sound. It is intended to prepare these Nootka myths for publication by the Survey.

A paper on 'Some Aspects of Puberty Fasting among the Ojibwa,' based on the results of his Ojibwa field work, has been submitted by Dr. Radin, and will be published in one of the numbers of the Museum Bulletin.

ON IROQUOIAN FIELD-WORK, 1912.

(*C. M. Barbeau*)

The additional period of about four months' field-work in Quapaw Agency, Oklahoma—extending from April to August, 1912—has proved of real profit for the ethnographic study of the Wyandots and of their neighbours and kinsmen, the Cayuga-Senecas. The nature of the material collected during this period will be briefly described.

Wyandot Work.

About three months and a half were taken up by the study of the mythology and folk-lore, social organization, feasts and rituals, technology, and language of the Wyandots (or western Hurons). The bulk of this year's results pertains to their mythology, linguistics, and technology.

The principal informants utilized were Catherine Johnson, Allen Johnson, Henry Stand, B. N. O. Walker, Smith Nichols, John Kayrahoo, Star Young, and Maggie Coon, of Wyandotte Reservation, Oklahoma, and Mary McKee, of Amherstburg, Ontario.

The recent additions to the mythology, folk-lore, and heroic traditions are numerous and valuable in many respects; and thirty-five out of over forty-five narratives have been recorded in text form with interlinear translations.

Sixteen narratives deal with the mythical origin of various natural and sociological phenomena. The origin of the world, of the constellation of seven stars, and of the peals of thunder sometimes accompanying a sun-shower, are described: the world (or 'the island') as having been created on the Big Turtle's shell, after the downfall of a woman from the sky; the seven stars as being the seven brothers that ascended into the sky while dancing, after a prolonged fast; and the sun-shower peals of thunder as being caused by the impetuous son of the Thunder and a Wyandot woman of former times. The narratives concerning the origin of sociological facts relate, first, the mythical contests between the Big Turtle and several animals, which account for the priority of rank claimed by the Big Turtle clan over the other clans, and, second, the heroic adventures in the course of which privileged human beings have secured the protection of manitous (or totems). The mythic adventures accompanying the appearance of the manitous are of two slightly different types, characterized by the transfer of 'powers' and charms either to a single protégé for his own exclusive benefit, or to one or several protégés for the advantage of several. The myths of the first type tell how the Eagle, the Wolf, the monster Lion (referring to the puma, or 'felis concolor'), the Rabbit, the Maple-Tree, and a Tikẽ'ã (a fairy-like being) came to their protégés and gave them instructions accompanied by a charm, meant for their own exclusive use. The taboos of secrecy or of not killing the totem are mentioned, but disconnected from one another, in the Wolf, the Lion, the Eagle, and the Fairy myths. The adventures of the second type are those which took place for the benefit of a number of individuals collectively. The Snake myth (two additional versions of which have been taken down) explaining the origin of the Snake clan, and a tradition of the appearance of the White Otter to a woman of the Big Turtle clan to whom it gave the Ustura' dances, or the Big Turtle clan's ritual, bear reference to the clans as having enjoyed the protection of supernatural beings. The Flying-Lion,

the Beaver, and an invisible monster, on the other hand, are described as having protected one or several human beings in their fights against the gigantic Ground-Squirrel, the Spotted Snake, and a buried human monster. The remains of these are said to have been burnt and used by several people as charms, the efficiency of which was limited to special and beneficent purposes. Another myth of a different type accounts for the invention and subsequent use of a well-known remedy against small-pox, derived from the mythical league and strife between the pole-cats and the new disease, at the time when the white people were first seen.

The folk-lore and heroic traditions may be studied to still better advantage in the rather voluminous stories concerning the giants, the deeds and contests of heroes, sorcerers and witches, the fabulous adventures of animal characters, and the traditions concerning several wars of the past. The nature and habits of the mythical giants are further illustrated in three comparatively short narratives. The quasi-epic deeds and contests of heroes, sorcerers and witches, are related at considerable length in the following stories: that of the ill-treated step-son who became a prosperous Indian with the help of his manitou, the Steer; of the uncle and nephew whose rivalry and strife resulted in the ultimate success of the latter, owing to the interference of three manitous in turn; of the suitors and the old witch whose mischievous 'powers' were drawn from the White Bear monster; of the two cousins—one of whom was a cannibal—their trials and tribulations due to a witch, their mother-in-law; of Tatẽria, a sorcerer, and his brother, a hunter, who finally overcame a witch and her brother, a professional gambler; of the many pranks that the Trickster played upon a covetous old woman; and of the destruction of a witch who had assumed the form of a hen in order to practice her harmful art. One of two other stories constitutes a second and more modern series of episodes consisting of the clever tricks of Tuñẽtawidi'a, played on other people; the other, probably of foreign origin, is a satire on a simple-minded fellow. In several other tales, the principal characters are animals, otherwise behaving like men. To this category belong the story of the Deer and the Owl, several episodes of the Fox and Raccoon tricks, the Rabbit and the Wolf, and a few others. A good many interesting old-time customs and beliefs are also to be noted in several legends and anecdotes, such as: the destruction of horned snakes in a cranberry patch; the appearance of a wild cat with a bleeding scalp as a bad omen; the rituals that a hunter and his wife once performed during a famine in order to get a good hunt; the troubles and trances caused by a deceased hunter who had been improperly buried in the woods; the alleged superiority of Indian medicine-men over white physicians as revealed by their successful treatment of an Indian girl, whose illness was the result of the violation of a religious duty; and, among other things, a description by an old hunter of the way in which he once secured a huñoⁿt or small deer charm, as well as other of his recollections as a professional hunter. Isolated and fragmentary explanations bear upon many other aspects of the folk-lore, namely, the puberty seclusion of girls, the getting and transmission of charms, a charm in connexion with thunder, and so on.

The heroic traditions of the tribe have almost all vanished from the memory of the present survivors, and only five narratives could be taken down. These are: the wars of the Wyandots against the Senecas, against the Cherokees—in which the Thunder is said to have interfered in favour of the Wyandots, against the English, and against the Pawnees; and a tradition relating the first meeting of the white people and the Delawares, and the prophetic reproaches addressed to the Delawares by the Wyandots for their leniency towards the invaders.

To sum up, it may be stated that this body of mythology and folk-lore (regardless of its linguistic import as text material) is especially valuable not only as affording an excellent field for the study of Wyandot psychology, but also as

including a large number of interesting data on their mythical history, the manitous or totems and their function, the deities, heroes, sorcerers and witches, the art of witchcraft, the preparation and use of charms, and, to omit several other topics, on the hunting, burial, and war customs of former times.

Considerable time has been devoted to the study of the Wyandot language, and the indispensable linguistic data have been secured either in the form of texts with literal translations, or in direct investigation in the course of, first, a close analysis of the texts and about seven hundred individual names, and, second, the collection of a fairly large number of paradigms; that is, the full or partial conjugation of radicals with pronominal prefixes.

Allen Johnson deserves special mention for his meritorious assistance both as interpreter and informant on linguistics. Henry Stand, Eldredge Brown, and Mary Kelly had, previously, been used for the same purpose, but with less satisfactory results.

A complete grammar and study of the phonetics, and an extensive vocabulary may, presumably, be worked up out of the material now at hand. A large number of paradigms pertain to the following categories: subjective pronominal elements prefixed to verb radicals, conjugated in the present, perfect, and future tenses; compound objective and subjective pronominal elements with verb radicals, mostly all in the present tense; possessive pronouns with noun radicals, and nouns followed by verbal adjectives; possessive and personal pronouns in connexion with, apparently, three classes of terms of relationship; and, finally, subjective pronouns prefixed to compounded noun and verb radicals.

Classificatory work on these data has since been taken up with very encouraging results. All the paradigms of the subjective pronominal elements prefixed to verb radicals belong to two distinct classes of five conjugations each. The first class consists of five series of fifteen pronominal prefixes, and the second class of five series of eleven. While four pronouns in the singular, five both in the dual and plural, and one indefinite, are found in the conjugations of the first class, those of the second class consist of four, two, four and one persons in the singular, the dual, plural, and indefinite, respectively. Every conjugation of the second class, moreover, corresponds to one of the first class, and a radical may, under certain circumstances, pass from a conjugation of the first class into the corresponding one of the second, as in other Iroquoian dialects.

These paradigms, although strictly analogous to, and parallel with, those of other Iroquoian dialects, reveal greater complexity owing to specialized phonetic rules peculiar to Wyandot. The second and fourth conjugations of the first class, for instance, are each divided into three sub-conjugations, and the fifth into two.

It may be pointed out, at once, that all the radicals or stems belong exclusively to one conjugation of the first or the second class, according to the nature of their initial elements; in other words, if the stem itself begins with a vowel or a consonant it will belong to the conjugation that is characterized by that vowel or consonant as initial. The stems in *a*—, for instance, belong to the first conjugation; those beginning with a consonant belong to the second, and with *i*— to the third. The fourth is made up of the stems in *e*— and ^{e}—, and the fifth of those in *u*— and o^{n}—. In the second conjugation, besides, a contracted series (termed sub-conjugation) is found in connexion with stems beginning with *d*— or *n*—, *r*—, and original Iroquoian *y*.

Several series of *t*— and *s*→ prefixes, combining with the various pronominal elements, cause a number of interesting modifications that have proved of value in the discovery of a number of important phonetic rules.

The tabulation of the composite objective and subjective pronouns has not yet been completed, and the thorough elucidation of other pronominal elements

and of grammatical, syntactic, and phonetic rules will depend upon further inductive work on the material already available.

The study of the technology and material culture has progressed quite satisfactorily. Over eighty specimens, connected with other data, pertain to the ethno-botany of the tribe, and about a hundred and thirty other miscellaneous articles are illustrative of the following arts and crafts: the methods, weapons, and objects connected with transportation, hunting, war, sports, and witchcraft; the utensils and other items of domestic utility, such as houses, traps, baskets, paddles, spoons, pestle and mortar, toys; and the various articles constituting men's or women's attire, for instance, moccasins, leggings, coats, sashes, headdresses, and pouches.

While most of the ethno-botanical specimens and data at hand are connected with medical treatments, a few are illustrative of foods, dyes, and textiles. Most of the medicinal treatments connected with plants seem to rely upon the direct efficiency of the plant itself, by means of decoctions or poultices obtained therefrom. The quality of others, however, depends upon either their magical properties or some ritualistic device.

A number of interesting specimens prepared for the Museum by Maggie Coon, Catherine Johnson, and Becky Dushane, of Oklahoma, and Caroline Groslouis, of Lorette, will allow a fairly extensive study of the decorative arts, in the form of bead, moose-hair, porcupine quill, and ribbon appliqués. Decorative patterns in connexion with silversmithing, wood and bone carving, although rather scanty, are not altogether wanting. Many interesting old articles of the same kind have, besides, been examined in the United States National Museum in Washington (a number of moose-hair embroidered moccasins, evidently of Lorette make, collected by Catlin, about 1835), in the University of Pennsylvania Museum in Philadelphia, the American Museum of Natural History in New York, and the Art Gallery of Detroit.

Remarkable conservatism is characteristic of the decorative arts of the three bands of the Hurons, as most of the patterns or designs made at Lorette, Anderdon, Kansas City, and Wyandotte are either identical or strikingly analogous, notwithstanding different surroundings and foreign influences exerted in the course of over two centuries and a half of isolation, and the substitution of different kinds of raw material to work with. While most of these patterns represent flowers, leaves, and animals (some of the clan totems), another probably refers to a mythological subject. Other patterns are geometrical figures or borders of various kinds.

The only further accessions for the study of music consist of about forty songs recorded on the phonograph with John Kayrahoo, of Wyandotte, Oklahoma, and an Indian flute made by old Smith Nichols.

Comparatively little new material has been forthcoming on the social organization, government, and the feasts and rituals, as special attention had been directed to these topics in the previous period of field-work.

With regard to the social organization, some time has been spent on the elucidation of certain problems on the heraldry, the retranslation and linguistic analysis of individual names, the question of priority of rank of the Big Turtle or the Deer clans (the heads of the two phratries respectively), and the terms of relationship.

A close analysis and retranslation of the traditional individual names belonging to each clan has borne out the fact, already pointed out in last year's report, that most of these names refer either to the eponymous animal (or clan totem) and the mythology of the clan, or to some characteristic trait or deed of an ancestor within the clan. The most trustworthy informants, in this respect, are under the constant impression that all these names refer or should refer to the totem, which

—as above stated—is by no means always the case. In the course of this analytical work on over six hundred names, collected last year at Anderdon and Wyandotte, it has been observed that a small number of names were now embodied in the current stock of names of the present-day clans that had formerly belonged to the now extinct Hawk, Beaver, and Prairie Turtle clans. It was gratifying to find that over a hundred Lorette individual names, copied down from the old parish registers, could be recognized and translated by the Oklahoma interpreters, notwithstanding their faulty phonetic spelling. Many of these names are the same as those used by the western Hurons and belong to the Turtles, Bear, Deer, and Wolf clans; whereby it becomes clear that these names were used or known in various sections of the nation at the time of the final dispersion, in 1648.

Further information on several rituals, already studied last year, has been taken down. According to the old-time Wyandot calendar, the year seems to have been formerly divided into four seasons and thirteen moons; the Green Corn thanksgiving feast, held in the first full moon of August, apparently marking the end of the year. Three ancient rituals (the Big Turtle clan's ritual, that of all the clans assembled together, and a scalp dance) have first been called to our attention only as late as this summer, the informants knowing of their former existence merely by hearsay. The Big Turtle clan's ritual, termed the ustura' dance, used to take place at the time of the Green Corn feast, although it was, in former times, held independently. This ritual is said to have originated from the mythical White Otter who appeared to a secluded woman of the Big Turtle and gave her a series of dancing songs—five of which have been recorded on the phonograph—and directions, meant to be transmitted to the people of the Big Turtle clan. Of the scalp dance, performed in the course of a war expedition, only three songs and some details could be remembered. The nature of another interesting ritual—termed a'stayaérati—could not be fully ascertained, notwithstanding fairly extensive descriptions on the part of three independent informants. It is stated to be the clan's communal feast (perhaps a feast of the confederation of the clans), in which all the clans shared and had to be represented by one or several members respectively; each clan having, moreover, a distinctive song, four of which have been recorded, for the use of its own members.

Some practices and rituals accompanying the removal of disease from a patient, the gathering of plants for medical purposes, the selection of a wife for a chief's son, have also been briefly studied, as well as the games of ball and racket for women, the lacrosse game for men, and eighteen songs for the moccasin game.

About a hundred and eighty kodak photographs (portraits of adults and children, pictures of houses, traps, moose-hair patterns, and other articles) may also be mentioned here as part of the ethnographic material now available for the preparation of the final reports on the ethnography of the Hurons and Wyandots.

Cayuga-Seneca Work.

An excellent opportunity offered itself, in the course of field-work among the Wyandots of Oklahoma, for some incidental research among their close neighbours and kinsmen, the Cayuga-Senecas, of Seneca Reservation, Oklahoma. Specimens have, therefore, been collected, pictures of individuals and views of ritualistic performances taken, and a number of ritual and other songs recorded on the phonograph and explained.

With a view to gaining a clearer insight into some of the Wyandot rituals, it was deemed advisable to study, at least briefly, some of the similar feasts that are still carried on among a people that has long been closely associated with them,

especially in order to ascertain whether any of the material so far gathered among the Wyandots had been ascribed to its proper source. The space of altogether less than a fortnight has been spent on this investigation with the well-informed Cayuga head-chief, James Logan, his wife acting as interpreter. It has proved most fruitful in so far as, first, about two hundred and forty Cayuga ritual and dancing songs have been taken down on the phonograph—all of which have already been transcribed by Mr. J. D. Sapir of Philadelphia, Pa.—together with extensive notes on the method of dancing and the nature of each song and ritual; second, the individuality of both sets of Wyandot and Cayuga feasts has been clearly ascertained; and, third, an interesting light has been cast thereby on certain Wyandot rituals, the meaning of which became clearer when their Cayuga counterparts were explained. These Cayuga songs fall under three headings: the ritual dancing songs—constituting the bulk, the 'stamp' or 'stump' dances, and a few lyric songs.

The ritual songs, grouped in several series of about ten to twenty songs each, belonging to as many distinct feasts, will be published as an integral part of a sketch dealing with the nature and circumstances of the feasts, as described by the same informants. These songs all pertain to the following ceremonials, namely: several thanksgiving or 'first fruits' rituals, the White Dog sacrifice, a naming and an adoption feast, a dance in commemoration of a mythical event connected with all the clans, and, finally, a bear's head ritual. The 'first-fruits' or thanksgiving rituals observed are the Green Corn, the Strawberry, the Sun, and the Blackberry or Moon dances. These were all intended as a return of thanks to the Great Spirits, apparently embodied in the Sun and Moon, for the harvest of Indian corn, cereals, squashes, and fruits, and, also, as a request for the continuance of the same favours, general or special, during the following seasons. The Green Corn dances, formerly held on the first full moon of August, included several series of dancing songs, of which three series, containing thirty-seven songs, have been taken down. The first of these series was performed in the morning, the second after a naming ritual, and another, termed 'the Beans dance', was performed at night. Twelve songs and a set speech of thanks belonging to the Sun dance (generally termed 'war dance,' although not quite accurately) have also been recorded on the phonograph. As this feast was actually witnessed in October of the previous year, notes and photographs also are now at hand. The Blackberry dance, taking place at night on the full moon of July, was begun with an evening series of songs and wound up, in the morning, with three calls to the moon and another series of songs, thirty-six of which have been recorded. In the course of the same night, several 'stump' dances were taken up for the entertainment of the crowd. The Strawberry dance—performed in the afternoon, early in June of this year—was witnessed with profit, and a number of pictures of the ceremonials were taken; fourteen songs and a set prayer were also repeated on the phonograph by James Logan.

In the course of the Green Corn feast a naming ritual was formerly held between the first and second series of Green Corn dances, for the transfer of traditional individual names to the yet unnamed children of each clan, or the occasional substitution of another name by some adults. Each clan had a series of naming songs of its own, one of which had to be sung while a name was conferred. Fifteen of the Deer clan's songs have been secured.

Only three songs could be thought of that formerly belonged to the secret commemoration feast of the clans, termed atihi'tu's. An account of the myth of origin and, also, of some of the ceremonials, has been taken down. While a fairly extensive description of the White Dog sacrifice, accompanied by the only three songs belonging to it, has been given by James Logan and his wife, almost no in-

formation at all could be had on the bear's head dance, in connexion with which seven songs were remembered.

The sixty-eight 'stump' dancing songs for social entertainment, all but fourteen of which have also been sung by James Logan, consist of the following series: one performed in the evening (after the 'Seed dances') at the Green Corn feast; another old dance for women only; a characteristic dance for men and women, meant to stir up the sleepy dancers at night; and, finally, two other sets, the Fish and Raccoon 'stump' dances, the last of which was recorded with John Kayrahoo.

The eleven lyric songs obtained are interesting on account of their having been composed in a thoroughly Iroquoian style about fifty years ago by James Logan himself, who meant them as drinking songs.

The hundred and thirty-five Cayuga specimens, all accompanied by explicit data, illustrate various aspects of their ancient technology. While some pertain to their rituals, their aesthetic arts and games, others were meant for domestic use, warfare, and transportation. Twenty-four of these articles are of ritualistic significance, namely, the decorated paddles, spoon and basket used in the White Dog sacrifice, masks, rattles, head-dresses and an old Sun emblem, formerly used either in medicine practices, the Sun feast, or other ceremonials.

The aesthetic arts and the games are illustrated by about twenty-five objects, such as flutes, embroidered specimens, silver work, dolls, and several rackets, balls, and wooden bowls, the last of which were used in the games.

Of the implements and tools connected with domestic utilities, the splint baskets, bark trays, hominy sieves, and ladles are the best represented. Articles of clothing (moccasins, sashes, garter, coats, and leggings), weapons for warfare or hunting (war clubs, bows and arrows), models of canoes, paddle, house, cradle-board, and so on, conclude a list of interesting specimens available for exhibition purposes or for the study of comparative Iroquoian technology.

About a hundred and seventy-five photographs—the bulk of which are portraits of Oklahoma Cayuga-Senecas, and the remainder photographs of their Strawberry ritual—have also been taken and are now filed away at the Museum.

ON INTERIOR SALISH WORK, 1912.

(C. M. Barbeau)

A brief study of the cna'^{a}m (or 'individual totems') and songs of the Interior Salish Indians, of British Columbia—consuming altogether less than ten days, in the earlier part of January, 1912—was occasioned by a delegation of chiefs from British Columbia waiting upon the Dominion Government on official business. Through the kindness of Mr. James Teit, their interpreter, research work was at once taken up with Chief Tetlenitsa, an excellent Thompson River informant, Mr. Teit himself acting as interpreter, and Ignace Jacob, a Lillooet.

Thompson River.

The Thompson River (or Ntlakapamux) ethnographic information was obtained exclusively from Chief Tetlenitsa and Mr. Teit; Mr. Teit speaks the Thompson River Indian language and has become thoroughly acquainted with their institutions, in the course of twenty-eight years residence among them. This material consists, first, of discussions on the cna'^{a}m, what they prove to be, how and when they appear to their protégés, and their gifts to them; second, of about twenty-five dream and lyric songs recorded on the phonograph, almost all of which are accompanied with words that have been carefully written down phonetically, and translated with the help of Mr. Teit.

(*a*) The Thompson River cna'^{a}m is a 'totem' or mythical guardian whose protection, emblems, and instructions seem always to be intended for the exclusive benefit of a single individual. No attempt was made to get any extensive list of cna'^{a}m, as Mr. Teit himself had covered this field in a publication on the same tribe. The only cna'^{a}m explicitly referred to or described here by Chief Tetlenitsa and Mr. Teit were Coyote, the Loon, the two Black Bear Sisters, the Old Man, the Lizard, the Wolf and Hawk, the Ptarmigan, the Prairie Chicken, the Grass and Wind, the Cloud, the Mountain Peak, the Gun, the Arrow, and the Stump.

The cna'^{a}m appears to his protégé in the course of puberty training and, also, though seldom, on some subsequent occasions. The period of puberty training may last as long as twenty-five years, according to the calling of the novice; and it seems that the cna'^{a}m comes bodily to his protégé with a view to instructing him, especially during the periods of from two to ten days fasting incidental to the puberty training. When, later in life, on rare and special occasions, the cna'^{a}m actually appears to the protégé, it is to give him warnings of danger and appropriate directions.

Some interesting points have come out regarding the manner in which the cna'^{a}m appears to his protégé, and his way of introducing himself. The apparition may take place in two different ways, first, in a 'dream' (ci'kwalaux), and second, in a 'vision' (cwawíkŭm, from wíkŭm 'one sees'). By 'vision' is meant an actual and impressive appearance of the cna'^{a}m, in a human form, to a protégé, who is, at the time, awake and fully conscious of what is happening. A 'dream' means, here, a similar appearance, but to the protégé when asleep. The cna'^{a}m, although externally always a human being, is claimed to be more than a mere human being or animal, on account of its altogether superior 'powers'. It may appear bodily to the novice, sometimes in 'dreams,' sometimes in 'visions,' or it may simply converse with the novice without being seen at all. The greater the 'powers'

(or 'mana') of the novice become, the more intimate and prolonged have to be his acquaintance and familiarity with his mythical guardian. When the period of training is over, the cna'ᵃm very seldom appears in a 'vision', although more frequently in 'dreams'. Cases are also mentioned where some protégés, for improper conduct or the lack of observing taboos, have been altogether abandoned by their protectors. Whenever the cna'ᵃm makes its appearance, the protégé is always addressed with the formal words, 'I am the Bear . . . , the Cloud,' or whoever it may happen to be, in order that it may be recognized. Before stating what gifts and instructions are generally received from the cna'ᵃm, it may be noted that, as a rule, the novice has to relate in public his adventures with his guardian, as soon as his seclusion is over.

A novice is said to become lucky in his undertakings, endowed with a long life, and immune against all kinds of accidents as soon as he gets a sufficiently powerful cna'ᵃm, the instructions of which have, in fact, to be scrupulously observed. The instructions that the protégé receives from his cna'ᵃm pertain to the following topics: the choice of a career, the selection of a name, of body paint and paraphernalia, the observance of certain taboos of either a positive or a negative nature, and, if the novice is to become a medicine-man, the methods of healing the patients. A 'dream' song, considered as endowed with magical efficiency, is, besides, received in the same way.

The puberty training customs are said to be part of the ancient schooling system of the Salish, the cna'ᵃm being a real, as well as mythical, director of the course which the education of the novice is to assume. The calling of a young man is often decided upon by his guardian quite regardless of his own wishes or ambitions. The individual name bestowed upon the novice is either that of his personal totem or another one selected by the totem. The instructions regarding emblematic paintings and paraphernalia seem important and interesting. They may refer to the style and subject to be used either in painting one's body or articles in one's possession. Some of these paintings represent the totem; others are meant to operate by means of sympathetic magic. Mr. Teit has already prepared an extensive study on these face and body paintings. The positive taboos are those resulting from an order of the cna'ᵃm to eat certain parts of animals in specified circumstances; for instance, a man whose chief individual totem was the Deer had to eat the raw kidneys of every deer that he killed while hunting. Other taboos are negative, in so far as they prohibit the use of some foods, vegetable, or animal. Such taboos may be changed later in life by special command of the totem. The twelve 'dream' and 'vision' songs, recorded on the phonograph and taken down as texts with translations and explanations, belong to the following categories: cna'ᵃm songs for good-luck generally, songs for twins, sweat-house, medicine and war songs. The songs for general good-luck, as recorded, are those that were learned by several novices from the Loon (a 'vision' song), the Coyote (a 'dream' song), the Grass and Wind (a 'dream' song), probably also the Prairie-Chicken and the Mountain Sheep songs, and the Black Bear Sister's and the Old Man's songs. Tetlenitsa's extensive relation of his own experiences with his cna'ᵃm—first, with the two Black Bear Sisters, second, with each of the two Black Bear Sisters individually, and last of all, with the mythical Old Man—constitute, together with his 'vision' song and a text containing the Old Man's utterances, a most interesting first hand description of a series of 'dreams' and 'visions' as accompanied by their typical concomitants. The four medicine songs and other information given by Tetlenitsa and Mr. Teit were those that as many medicine men of their acquaintance had received from their protectors, namely: the Lizard, the Wolf and the Hawk, the Ptarmigan, and the Eel and a bird. A song for twins, revealed to the parents of twins by the Grizzly-Bear, the traditional cna'ᵃm, apparently, of all the twins; a sweat-house song and

prayer; and two war songs, together with interesting information on the sweat-house and war practices and cna'ᵃm experiences, have also been taken down.

(*b*) The twelve Thompson River lyric songs recorded are miscellaneous in nature and consist of four love songs, four gambling songs, and potlatch, riding, and berry-picking songs, all of which have words.

Lillooet.

Far briefer information on the Lillooet has also been furnished, along the same lines, by Ignace Jacob, a Lillooet from Pemberton Meadows, and seven songs have been recorded.

Puberty training was described by Ignace Jacob as being the old Indian system of education, lasting from five to twenty-five years. The secluded candidates aimed at becoming hunters or medicine-men with the help of a sna'ᵃm. A few candidates only were fortunate enough, however, to secure such protection, as personal dexterity was not, it seems, the only requirement; considerations of inheritance either in the father's or mother's line being also involved. It is pointed out, as a consequence, that claiming fraudulently the encounter and protection of a fictitious sna'ᵃm, on the part of an unsuccessful candidate, was not altogether unknown. The Salmon or Trout, the Snake, the Duck, the Humming-Bird, the Thunder-Bird, the Whale, a monster (corresponding to the Sisiutl or Heitlik of the coast), a Woman, the Spear and Arrow are mentioned as sna'ᵃm, the names of which are familiar to the Lillooet. A sna'ᵃm is described as appearing in the form of a man or animal to a candidate who is asleep and dreaming, and also later, while he is actually awake, if really successful in getting it as a protector.

The snaᵃm songs taken down with Jacob are: a private song used in a ceremonial taking place in December, two medicine men's songs, and a Bear song for twins.

Three lyric songs with words (a Lillooet longing song, a Chilcotin gambling song, and a weeping song from the Lower Frazer) have also been added by the same informant to the collection of Salish songs now in the Victoria Memorial Museum.

ON IROQUOIS WORK, 1912.

(*A. A. Goldenweiser*)

The following summary report is based on the data collected among the Iroquois tribes at Grand River, Ontario. The periods spent in the field were: in 1911, from July 6 to August 20 and from December 22 to 31; in 1912, from January 1 to February 9, from May 20 to July 2, and from September 7 to November 12—aggregating seven months. Throughout the work most emphasis was put on social organization, but information on ceremonies, societies, and mythology gradually accumulated until now the total amount of data on the last three topics about equals that on social organization. Among my informants, by far the most thorough and versatile was Chief John A. Gibson (Seneca) who died on November 1, 1912, while our work was in progress. Among the many other informants I should single out the following: ex-Chief George Gibson (Seneca); William Sandy (Cayuga); ex-Chief Abraham Charles (Cayuga); Chief John Danford (Oneida); Chief E. G. Smith (Mohawk); ex-Chief Isaac Hill (Mohawk); Chief David Skye (Onondaga); ex-Chief Johnson Williams (Onondaga); Mrs. Mary Gibson (Cayuga); Mrs. Thomas Kee (Cayuga); Mrs. Elliott (Mohawk); and Mrs. Mary Sandy (Tutelo). The data as here presented are based exclusively on my own investigations. The vast literature of the subject has not been referred to, nor has any effort been made to enter into the discussion of differences between the older material and my own data. All of these points will be fully considered at the proper place.

The method of presentation of the material here adopted necessitated a certain amount of repetition.

Social Organization.

The Phratry:—Each of the five tribes of the confederacy is divided into clans which are grouped in two 'phatries.' These dual divisions do not, among the Iroquois, have any names, nor is there any evidence of a former existence of such names. The clans of one division or 'side' call each other 'brothers,' while the clans of the other 'side' are their 'cousins,' and vice versa. No origin myths referring to these divisions were obtained except the account contained in the Deganawida myth. Although my genealogies do not extend far enough back to bear witness to the former exogamy of the 'sides,' the frequency of intra-phratric marriages seems to be less in the older sections of the genealogies. Moreover, all of the older informants are agreed as to the ancient exogamy of the 'sides' and remember incidents falling into the period of transition when the ancient rule began to give way, presently to be superseded by another exogamous regulation, that of the clan. There can, therefore, be no reasonable doubt that in ancient times the two main divisions of an Iroquois tribe were exogamous. The functions of the sides are manifold and all-important. At games, such as the peach-stone game, or lacrosse, the 'sides' are lined up against each other. The 'brothers' and 'cousins' are similarly divided at contests such as the snow-snake game or target practice with bow and arrow. At all feasts the action as well as the spatial arrangement of the participants reveal the presence of the two 'sides.' The same is true of ceremonies of adoption, ceremonies at which 'friends' are made; night wakes, memorial ceremonies, and burial. In the latter instance, the func-

tionaries at the burial ceremonial are always selected from the 'side' opposite to the one of the deceased. At all great periodic festivals, such as the Strawberry Festival, the Green Corn Festival, etc., which are held in the ceremonial long-houses, the members of the two 'sides' are always spatially divided and face each other. A speaker represents each side and, in the course of the performance, always addresses the opposite side. At the preliminary meetings of officials which always precede the festivals, two men are usually appointed to go from house to house and solicit contributions to the feast; these men always represent the 'brothers' and 'cousins' respectively. The Death Feast Society and the tribal Medicine Societies, the so-called 'Little Water' or 'Real Life' societies, follow in their performance, the phratric division. The same seems to be true of the performances of the other medicinal societies, the False-faces, Otters, Buffaloes, etc. At the election of chiefs the 'sides' are functionally represented, a point to be presently referred to more specifically. At name-giving ceremonies, the name is bestowed by the 'side' opposite to the one to which the recipient of the name belongs. In the dream-guessing ritual the guesser must belong to the 'side' opposite to that of the dreamer.

At councils, on the other hand, that is, at all meetings of an administrative or judicial character, a tripartite arrangement takes the place of the dual division. (See section on 'The Clan').

The Clan:—We now pass to the consideration of the social units embraced in the phratry, the clans. The number of clans in an Iroquois tribe is not always the same; the Seneca, Cayuga, and Onondaga have now (at Grand river) and seem to have had for some time past more than eight clans each, while the precise number of clans is different for each tribe. To the Mohawk and Oneida we shall return presently. Not every clan is represented by a chief in the Confederacy. One informant states that the arrangement of clans into phratries differed before and after the formation of the Confederacy. While the historical reference is doubtless wrong, the statement is not without significance. The clans of the Seneca before Confederacy (B. C.) and after Confederacy (A. C.) can be represented as follows:—

B. C.

Turtle	Hawk
Bear	Deer
Wolf	Snipe
Ball	Duck
	Eel

A. C.

Turtle	Hawk
Bear	Little Snipe
Wolf	Great Snipe
(Ball)	(Duck)
	(Eel)

Of the latter list, the Duck, Eel, and Ball clans were never represented by chiefs in the Confederacy. No individuals belonging to the Eel or Duck clans can at present be found among the Grand River Seneca. As stated before, the arrangement of the clans at councils did not follow phratry lines. The Seneca chiefs, for instance, when in council, were grouped as follows:—

GROUP I ('in control')

{ 1 Turtle Chief
{ 1 Little Snipe Chief

GROUP II	GROUP III
1 Turtle Chief 1 Bear Chief 1 Wolf Chief	{ 1 Hawk Chief { 1 Little Snipe Chief { 1 Great Snipe Chief.

For purposes of discussion there was a further subdivision. The Turtle chief (II) conferred with the Hawk chief (III), the Bear (II) with the Little Snipe chief (III), the Wolf (II) with the Great Snipe chief (III); the Turtle and Little Snipe chiefs (I) had the deciding voice. This grouping of clans and phratries had its analogue in the grouping of tribes of the Confederacy. On ceremonial occasions the grouping was as follows:—

Mohawk Onondaga Seneca	{ Oneida { Cayuga

When in council, the tribes assumed the tripartite arrangements:—

ONONDAGA ('in control')

Mohawk Seneca	{ Oneida { Cayuga

The Mohawk and Oneida seem to have had only three clans each, Chief Gibson's insistence to the contrary (in the earlier part of our work) notwithstanding. These were the Turtle, Wolf, and Bear clans. However, among the Oneida of Oneida Reserve (near St. Thomas, Ont.) these three clans are each subdivided into three groups differentiated by the size or species of the eponymous animal. These minor groups, moreover, have their distinct sets of individual names and of the nine Oneida chiefs each is associated with one of the minor divisions. These facts were fully verified by genealogies. Their significance may become clearer in my further investigations.

Whether the clan systems of the Iroquois tribes are derived from a common historical source it is impossible to say. It cannot be doubted, however, that for a long period of time the clans, Wolf, Bear, etc., of one tribe were in no way associated with the corresponding clans of the other tribes. During the formation of the Confederacy and since, the intimacy of relations between clans of identical name but belonging to different tribes became very great. It always remained an equalization, however, not a fusion. And to this day each clan of each tribe must be regarded as the social unit. The practice of exogamy, it is true, has been extended to all clans of identical name; the clans of each tribe, on the other hand, have preserved their distinct sets of individual names. Owing to the disappearance of many individual names, cases where this last rule was disregarded have of late been known to occur. Whenever this happens, however, the act is freely criticized and disputes arise.

From the beginning of my investigations I was on the look-out for any beliefs or practices which might have pointed to the former existence of some special relations between the clansmen and the eponymous animal of their clan. All

inquiries in that direction, however, led to negative results. There was no prohibition on the killing or eating of the eponymous animal; no idea of descent from it was entertained; the eponymous animal was not a guardian or protector, nor was it a brother or friend of the clansman, Carved representations of clan animals certainly used to be placed over the entrance-doors of longhouses presumably associated with the particular clan; the practice of wearing carved miniature figurines of clan animals or of painting or tattooing them on the breast may have existed; vague references are also made to a former belief in the power of clansmen to hunt their eponymous animal successfully. Individual names among the five tribes of the Confederacy never refer to the clan animal or bird. The only indisputable fact about these eponymous animals is that they were eponymous. The animal names of clans, however, are by no means the terms by which they are commonly designated. For this purpose collective terms referring to some quality or habit of the eponymous creature are used, such as 'the people of dark complexion' (Bear), 'the people with small hoofs' (Deer), etc. Only on those occasions when the clan membership of an individual must be specifically indicated, for instance at condolence ceremonies, are the animal names used. In a description of the social organization of the Seneca, recorded in Seneca text, in which the arrangement of clans, etc., is systematically discussed, the clans are not once referred to by their animal names. The distinctive traits of an Iroquois clan may be summarized as follows: (1) the clans are exogamous (as this trait became extended so as to embrace the clans of identical name in all tribes, the clan in each tribe can no longer be regarded as an exogamous unit); (2) each clan has its own set of individual names; (3) the majority, although not all, clans claim a chief in the confederate body and participate in his election; (4) in ancient times a clan certainly owned a burial ground and possibly communal lands; (5) in ancient times clans may have been associated with longhouses, although probably not in the sense of one clan occupying or predominating in, only one longhouse; (6) in ancient times clans may have been associated with villages; (7) a clan has the right to adopt an outsider into the clan; (8) although the clans as such do not figure at ceremonies, they elect their own ceremonial officials.

No separate clan origin myths were found. When questioned on that topic, the Iroquois invariably refer to the Deganawida myth. I have recorded this myth in Onondaga text (525 pp.).

It must be noted as possibly significant that in the myths so far recorded no mention is made of clans and chiefs; instead, villages and headmen are always spoken of.

The Family:—Under this heading two distinct units in Iroquois sociology must be considered. On the one hand a family was constituted by one's relatives on the father's and the mother's side. This group was united by the ties of the classificatory system of relationship; one's father's brothers, for instance, were one's fathers just as one's mother's sisters were one's mothers, etc. The group also figured in a number of family ceremonies, and was important in connexion with marriages; it was also appealed to by the individual in numerous matters of personal behaviour, such as assuming a second name, or joining a society, or starting an important undertaking. Of far greater significance, however, was the group we may designate as maternal family. It embraced the male and female descendants of a woman, the descendants of her female descendants, and so on. The entire group was thus united by the ties of blood on the female side. The woman who at any time stood at the head of such a group wielded most powerful influence over its members. Moreover, the group as such had certain religious and ceremonial prerogatives. These functions of the maternal family have now become obsolete, and my material to date throws but little light on the old condition. In my subsequent studies I shall make a systematic attempt to

penetrate more deeply into the nature and significance of this social grouping. The genealogies indicate that whereas the chiefs are identified with clans, the actual succession follows the maternal family. The same is true of the ceremonial officials, of whom each clan has three male and three female. To a limited extent this also applies to individual names, which show a certain tendency to be passed down in the maternal family, commonly by skipping one generation. In the study of these characteristics of the maternal family, the genealogies proved a most useful tool. All in all, my genealogies now comprise over twenty-five hundred individuals and about half as many marriages. One genealogy of 258 individuals was tested as a means of systematizing the informant's data, a set of questions being asked about each individual. The results, both in quantity and quality of the information obtained, indicated that wherever genealogies can be obtained they should be used for that specific purpose. All questions where descent was involved as well as such phenomena as the gradual disintegration of the exogamous system, were tested by means of the genealogies.

The Raising of Chiefs and the Functions of Women:—The judicial and executive powers of the Iroquois Confederacy were vested in a body of fifty chiefs. Of these nine came from the Mohawk, nine from the Oneida, fourteen from the Onondaga, ten from the Cayuga, and eight from the Seneca. These chiefs must be strictly distinguished from the warrior chiefs who were elected whenever occasion required, whose office was not hereditary, and whose powers expired with the termination of the raid or other military undertaking which had brought them into being. In the case of the fifty civil chiefs the elective and hereditary principles were curiously combined. Every chief was associated with a clan—although not every clan was represented by a chief; but the hereditary right to elect a chief belonged to a smaller unit, the maternal family (q. v.), or a body of persons united by the ties of consanguinity. Small genealogies collected with this special point in view, show clearly the extent of the elective principle within these small social bodies. There seems to have been no age limit to the office of a chief; but an aged chief feeling his powers waning, would of his own accord resign, leaving his place free to be filled by a younger man. When a man was made chief, he laid aside his individual name and assumed a chief's name, which was his while he continued to be chief and then passed on to his successor, and so on *ad infinitum*. Every chief's name had a definite place in the set of chiefs' names, and at condolence ceremonies, when the names were recited, the fixed order was strictly adhered to. The differences of rank probably once associated with these names cannot now be clearly discerned, except in the case of a few names.

When a chief died, the women of his tribe and clan held a meeting at which a candidate for the vacant place was decided upon. A woman delegate carried the news to the chiefs of the clans which belonged to the 'side' of the deceased chief's clan. They had the power to veto the selection, in which case another women's meeting was called and another candidate was selected. Usually, however, the first choice of the women was confirmed by the chiefs of their own 'side' and then by the chiefs of the opposite 'side'. Thereupon the candidacy was carried to the Confederate Council to be ratified, first by the Confederate phratry of the deceased, then by the opposite phratry (see section on 'Clan'). This was followed by a public condolence ceremony in the course of which the chief was formally 'raised,' instructed in the rights and duties of his office, and adorned with the horns of the deer, the symbol of his high station. The condolence ceremony is fully described in the Deganawida myth.

The participation of the women in the procedure did not end there. The woman delegate, the same who had carried the announcement of the candidate to the chiefs, had to keep close watch over the ways and actions of the young chief. If he displayed an inclination to deviate from the accepted code of behaviour,

the woman delegate appeared before him and tried to persuade him to desist from his evil practices. If after a time she discovered that her appeal had no effect, she repeated the visit. If that also proved of no avail, she was joined by a warrior chief of her clan, and together they made a last attempt to induce the chief to reform. If their efforts proved unsuccessful, the woman delegate called a meeting of the women of her clan and publicly denounced the chief. The impeachment then passed through the various bodies referred to before, up to the final ratification by the Confederate Council. Thereupon the chief was formally deposed, and his place was declared vacant.

The prominent part played by women in the election and deposition of chiefs marks her high social status among the Iroquois. Of the six ceremonial officials who were hereditary in each clan, three were men and three women. The preparation and conduct of almost all ceremonies were in the hands of these officials. Some of the most important ceremonial societies, such as the Dark Dance and the Death Feast societies, were not only run by the women but the latter also constituted the larger part of the membership in these societies. Although women had no formally recognized voice at councils, nor ever appeared, so far as known, as appointed speakers at ceremonies, speeches were often made by women in council as well as on ceremonial occasions. Some women, a few within the memory of men now living, were reputed as skilful orators and must have wielded strong personal influence. Woman was pre-eminently the owner of property. Whereas the husband, in ancient times, could regard as his own only his weapons, tools, and wearing apparel, his wife owned the objects of the household, the house itself, and the land[1]. The children who, of course, followed the mother's clan, belonged to her. The individual names, in each clan, were also regarded as belonging to the women. In the arrangement of marriages woman was the determining factor. Not, indeed, the bride, but her mother, together with the mother of the bridegroom. The two women had full power to arrange the match, and the wisdom of their decision was seldom questioned. The oldest woman of the clan, or the woman most respected for her wisdom and experience, was a most powerful factor in the affairs of the clan, and none, not even the chief, could with impunity disregard her advice. Nor did her influence end there, for she also exercised authority over the children of her clansmen, who (the children) belonged to many clans and widely scattered districts. Thus the entire social structure of the Iroquois was permeated by a maze of channels through which keen-witted women guided the affairs of the people.

Individual Names:—The Indian names of individuals are rapidly falling into disuse, and the younger people seldom remember more than a few. A persistent attempt was, therefore, made to record all individual names stored in the memories of the older men and women. The results were gratifying. All told, some two thousand names, male and female, were recorded. They represent the Oneida, Seneca, Cayuga, and Onondaga tribes. The Mohawk set is well below fifty, the Tuscarora set still smaller, but there are grounds for believing that these sets also will be considerably extended after further work at Grand River as well as at Caughnawaga. These names were not used as forms of address. They never figured in direct address, but when one spoke about a person, the name was sometimes used, in those cases namely when the meaning was not sufficiently clear from the context of the sentence. Although the individual names were a clan characteristic, the genealogies reveal some tendency to bestow upon a child the name of a dead relative. The name was given at birth; in many cases, in fact, it was decided upon before the birth of the child. The mother herself may decide upon the name, or an older member of the family, usually

[1] In so far as the relation between individual and communal property among the Iroquois is not fully understood, the above statements must stand subject to correction.

the grandmother, or also the grandfather. In recent times, perhaps due to the fact that the names are no longer a matter of common knowledge, it became customary for the parents, after the birth of a child, to consult one of those men or women who are known as the 'keepers' of the names, and whose knowledge of names that are in use and of others that are 'free' remains quite extensive to this day. John Gibson, the Seneca chief, was such a keeper, and from him I secured an elaborate list of Seneca names (over three hundred), including names that were 'free', a few of which were subsequently bestowed upon children born since the list was written out. Although a name is thus associated with a child from its birth, it is officially and ceremonially confirmed on two fixed occasions, on the second day of the Green Corn Festival or on the second or third days of the Mid-winter Festival. The name-giving ritual has been recorded in Onondaga text with English translation. Later in life, often at puberty, the first name may be set aside and another name assumed. This procedure also takes place on the two occasions specified above and consists of a somewhat different ritual.

Theoretically no two persons of a clan should at any time bear the same name. Formerly this rule was no doubt strictly observed; at present, however, owing to the depletion of names, the ancient usage has given way, and cases where two or more persons of a clan bear the same name are not uncommon.

In content, the names have nothing whatsoever to do with the eponymous animal of the clan. Animal names, although very rare, are occasionally given, but here again they may or may not correspond to the clan eponym. Moreover, in the few instances where such names were found, they were, excepting in one or two cases, of demonstrably late origin, nor were they regarded in the same light as the regular individual names: after the death of the particular person, the animal name was not included in the set of hereditary names of the clan, but could be used by any individual of any clan. The content of the names refers to the powers and phenomena of nature, the sun, moon, thunder, night, day, etc.; occupations in the house and field; social and ceremonial functions; features of the landscape; etc. The idea of duality is often expressed in a name.

In addition to these Iroquois names, a set of English names was secured which had become transformed, sometimes beyond recognition, by the requirements of Iroquois phonetics.

Puberty Customs:—The information that can still be secured on these customs in ancient times is exceedingly fragmentary. Enough data from many independent sources have, however, been secured to indicate the main characteristics of the old usages. When a boy's voice began to change he retired into a secluded shanty in the forest; there he stayed for one year, eating sparingly, and seeing no one except an old man or woman (sometimes a relative) who took care of him. Every morning the lad had to scarify his shins with a stone; he was also supposed to run a good deal, to bathe in ice-cold water, to swim until exhausted, etc. In an Oneida version, three shanties were built in the forest (near Oneidatown, St. Thomas) for the lads at puberty, each clan having a shanty of its own. There the lads stayed with an old man for a year and were subjected to various tests of endurance. Exemplary behaviour during this period was of vast importance for a boy's future position and success in life.

There seems to have been no corresponding extended period of seclusion for girls at the time of the first mensae. She retired to a shanty only for the time she was afflicted. She was not permitted to eat hot food, and a large number of foods were tabooed to her. She was made to execute hard tasks such as chopping hard wood with a dull axe, etc. These tasks often extended beyond the period of her seclusion. If the girl during her isolation in the shanty had any dreams, they would come true.

While there can be no doubt that guardian spirits were obtained among the ancient Iroquois, the data so far secured on this topic are very unsatisfactory.

The Relationship System:—The classificatory principle has been applied with great rigour in the Iroquois system of relationship, which is, therefore, characterized by its simplicity. Blood relatives are grouped, from the point of view of *ego* into five generations: the generation of *ego* (I), the first ascending generation (II), the second ascending generation (III), the first descending generation (IV), and the second descending generation (V). The main characteristics of the system are as follows: within each generation the classificatory principle is strongly marked; distinct terms of relationship do not extend beyond the second ascending and the second descending generations; a distinction is made between older and younger brothers and sisters. Thus, in generation II the term 'father' is applied to one's own father, to the father's mother's sister's son, to the father's father's brother's son, etc. Similarly the term 'mother' is applied to one's own mother, to the mother's mother's sister's daughter, to the mother's father's brother's daughter, etc. The term 'aunt' applies to one's father's own sister (although here 'mother' may also be used), to the father's mother's sister's daughter, to the father's father's brother's daughter, etc. The term 'uncle' applies to one's mother's brother, to the mother's mother's sister's son, to the mother's father's brother's son, etc. The III generation embraces the fathers and mothers of the individuals of generation II. To them the terms 'grandfather' and 'grandmother' are applied. These terms also cover all individuals, in the direct line of descent, of all higher ascending generations. In generation I the terms 'brother' and 'sister' are applied to one's own brothers and sisters, to one's mother's sister's sons and daughters, to one's father's brothers' sons and daughters, etc. The term 'cousin' (male and female) is applied to one's mother's brother's sons and daughters and to one's father's sister's sons and daughters. In generation IV the terms 'son' and 'daughter' are applied to one's own sons and daughters, to one's sister's (own and collateral) sons and daughters (*ego* being female) or to one's brother's (own and collateral) sons and daughters (*ego* being male), while the terms 'nephew' and 'niece' are applied to one's brother's (own and collateral) sons and daughters (*ego* being female) or to one's sister's (own and collateral) sons and daughters (*ego* being male). Generation V embraces the sons and daughters of all individuals in generation IV. To them the terms 'grandson' and 'granddaughter' are applied. These terms are also applied to all the individuals (in the direct line of descent) of the lower descending generations. In generation I separate terms are used for older and younger brother, and for older and younger sister. I shall not here refer to the terms applied to relatives by marriage. All of these terms were tested on genealogies which revealed various extensions of the terms and served to clarify shades of meaning attached to individual terms.

Ceremonies.

In every clan we find three male and three female officials whose duty it is to plan and superintend the ceremonial performances. Of these the most conspicuous are the periodic harvesting festivals. When early in spring the strawberries begin to ripen, the Strawberry Festival is held, an outline description of which I secured. In the course of the performance the motions gone through by the berry-pickers are imitated by the dancers. Similar festivities occur when the beans and raspberries are ripe. The Raspberry Festival I recorded in outline; while the Bean Festival was taken down in Onondaga text (in part translated). The ripening of corn becomes the occasion for an important four-day ceremony, the Green Corn Festival. Of this a fairly detailed, although not complete, description is in my hands. The most important periodic ceremonial of the year

is the Mid-winter Festival which lasts five days and is followed by a period of another two or three days during which games are played. Of this ritual I have an outline description, and part of it is recorded in Onondaga text. The sequence of events in the above series of festivals may be summarized as follows. About the time when a festival is usually held, the officials meet and deliberate as to the main features of the forthcoming feast. Then two men are sent out who go from house to house and collect contributions in victuals and, in modern times, money. A second meeting of officials is called at which the contributions are examined. If the amount is sufficient, a date for the feast is fixed upon. If the contributions are scanty, the two men are sent out for another round; then the date is fixed at a third meeting. The festival opens with the selection of two speakers who are appointed by the officials. Then follows an appeal to the Great Spirit and a thanksgiving address to the powers of Nature, in particular to the three sisters, Corn, Bean, and Squash. This address is repeated in practically the same form at all of the above festivals. Next in order are songs and dances for men, for women, or for both, accompanied by rattles or tomtoms handled by men especially appointed for that purpose at each feast. During the period of the dances, which in the Green Corn and Mid-winter Festivals occupy from two to three days, the religious societies also hold their performances. On the second day of the Green Corn and on the second or third days of the Mid-winter Festivals, babies are brought in by their mothers, and names are officially bestowed upon them. Dream-guessing is a special feature of the mid-winter rituals. Persons who had dreams announce that fact to the chiefs, and the dreams are guessed by persons of the opposite 'side' in the course of the feast. The one who guesses the dream must make for the dreamer a miniature object, a canoe, rattle, lacrosse stick, etc., around which the dream centres. The object is kept by the dreamer and is supposed to bring luck and ward off disease. In the morning of the fifth day of the Mid-winter Festival the Sacrifice of the White Dog takes place. I have witnessed and recorded the rite. The significance of the entire performance is, however, by no means clear to me. It is to be hoped that further intensive study of the ceremonies, a study which may extend over two or three years, will throw light on this somewhat puzzling ritual.

As regards other ritualistic performances, brief descriptions were secured of: (1) wakes; (2) memorial feasts; (3) death feasts, in the family and the tribe; (4) adoption ceremonies, of an individual or a group of individuals, in the family, clan, and Confederacy; (5) ceremonies at which 'friends' are made. A full description of the condolence rituals is contained in the Deganawida myth. Some of the so-called 'societies' also hold ceremonial meetings, in particular the Death Feast Society and the Medicine Societies, into the Onondaga branch of which I was initiated, having previously been adopted into the Seneca tribe and the Wolf clan.

Societies.

The societies of the Iroquois, whatever their history may have been, are at the present time medicinal in their functions. The society in each tribe which is most influential and sacred is the so-called Medicine Society referred to in the section on 'Ceremonies' (q. v.). Ritualistically it falls into two divisions, of which the 'Little Water' or 'Real Life' division is by far the more secret in its performances and powerful in its social bearings. The only way of joining this division of the society is by having a dream of a certain fixed type. The other division may be joined by any one who has met with an accident, had some bone broken, and was cured by the members of the society. The other societies are known as the False-face (or Corn Husk), the Otter, Bear, Buffalo, and Eagle societies. The Dark Dance and the Death Feast societies comprise a much more

elaborate ritual than the other societies, excepting the 'Real Life', and stand in a group by themselves. All of these societies are in full swing at the Grand River Reserve as well as among the Seneca of New York State (as revealed by Mr. A. C. Parker's data). There can, therefore, be no doubt that prolonged research will result in a much fuller body of information than has so far been obtained.

Membership in a society is secured in one of a limited number of ways. A man (or woman) may fall sick and dream of an otter or buffalo; he (or she) then calls in the corresponding society, who perform their rites, whereupon the patient finds himself cured. He (or she) then joins the society and thenceforth invites its members to a feast at certain indefinite intervals, usually about once a year. There may be sickness, but no dream. Then the parents of the patient, or an old relative or a 'prophet,' are consulted. These 'prophets' are men or women well versed in the traditional magical lore. They tell dreams, practice divinations, and in an inconspicuous way continue to wield a rather powerful influence among the modern Iroquois. Following the advice of the parent, relative, or prophet, the patient appeals to a society for a cure, and if their efforts prove successful, which is usually the case (for the time being, at any rate), he or she joins the society. Unless this is accompanied by the periodic festivities referred to above, the society takes revenge and the patient may again become afflicted. Some societies are appealed to as specialists in certain diseases. The False-faces, for example, are particularly efficacious in cases of swelling of the face, tooth-ache, inflammation of the eyes, nose-bleeding, sore chin, and ear-ache. One woman dreamed that she was crossing a river over an ice-bridge. The bridge gave way and she found herself afloat on a chunk of ice which continued to revolve, intermittently plunging her into the water and then bringing her to the surface again. She awoke and, after consultation with a prophet, became a member of the Otter society, which is intimately associated with water. Another woman joined the same society after dreaming that an otter carried her across a stream in a miniature canoe which the otter held in its mouth. One man, a skilled false-face carver, when he was a young boy, used to amuse himself by carving small false-faces. His parents objected to the practice and put a stop to it. About two months later the boy fell sick. Then his parents advised him to join the False-faces. He was cured by them and became a member of the society. Some three years ago an Oneida man of powerful frame and great strength, suddenly became ill. He could not locate the source of his trouble but felt his strength waning from day to day. His weight was rapidly decreasing. While he was thus afflicted, it so happened that he was travelling alone through the woods. Suddenly he heard a strange whistle which he readily identified as the voice of the False-face. Being of a skeptical disposition, he did not pay much heed to the incident, and reached home. Meanwhile his illness grew worse, and twice the False-face appeared to him in a dream, and spoke to him. Then he resolved to call in the False-faces. They performed their rites, and presently he felt relieved. Of course, he joined the society. (This personal experience is recorded in Oneida text.)

In addition to their activities as visiting physicians, some of the societies practice ceremonial rites or exercise medicinal functions of a more generalized kind. The Medicine Societies hold elaborate ceremonial meetings (see section on 'Ceremonies'). The False-faces, twice a year, in spring and in autumn, separate into two bands. The members of each band, wearing false-faces, rattles in hand, and garbed in appropriate costume, go from house to house and amidst singing and rattling of the turtle shells, drive away the disease spirits. Then the two bands reunite, and a ceremonial meeting is held at the tribal Long House.

I have recorded the origin-myths of the following societies: the False-faces (Onondaga text with English translation); the Buffalo Society (English); the Dark Dance and the Death Feast societies (English).

Mythology.

The mythological material so far secured is not large and curiously uniform. The prevailing type of myth is an epic account of the wanderings and achievements of a pure young man, often an orphan, who is an expert runner and hunter. Possessed by a desire to find out where the dead people go to or simply seized by a Wanderlust, he starts out alone, or accompanied by his bride, for the forest, hunts as he goes on, secures the friendship of the wild animals by sharing with them the produce of his chase, has encounters with Stone-giants, or Pygmies, or the False-face, obtains from them, often in exchange for some power of his own, various magical objects, incidentally witnesses the performance of the Death Feast or Dark Dance or a lacrosse game (which he subsequently introduces among his people), safely returns to his village, and henceforth becomes an influential man owing to his knowledge and powers. In these myths a day is always equal to a year, and animals always appear in the shape of men. In one myth, for example, an Indian stranded in an unknown country wanders on through the forest. Every night he addresses the wild animals and leaves for them the larger part of the produce of his chase; the animals, in return, protect him; he meets the False-face, visits the False-face village; presents them with twelve bowls and twelve bows and arrows of his own making. In return they promise to appear to him in dreams and warn him of dangers. Later he meets the Stone-giant, narrowly escapes death from his terrible voice, is pursued by the giant, but finally turns on his pursuer and cuts him to pieces with the giant's own axe. From the giant he obtains a magic skin which gives him power over all the animals, and a stone finger which, in falling, indicates a desired direction. The Indian returns to his village and, being warned by the False-faces of the approaching enemy, organizes a war-party, falls on his foes and exterminates them.

In addition to this, the following mythological accounts were recorded: the Deganawida myth (Onondaga text); the story of the Indian who scalped a chief who had insulted him; the traditional account of how Chief Danford's great-grandfather joined the False-face Society (Oneida text); the Origin of the False-faces (English and Onondaga text, incomplete owing to the death of Chief John Gibson, the informant); the Girl at Niagara Falls and the Snake (English); the story of the Dead People (English; Origin myth of the Death Feast Society); Origin myth of the Seneca clans and phratries (English; a version of part of the Deganawida myth); the Division of the Snipe Clan (English); story of the Young Brave who met a Serpent (woman) and saved his people from destruction (English); the story of 'Flier,' the great runner (Seneca text); the story of the Good Young Man and the Girl who gave him corn (Onondaga text and English); story of the Magical twins (English); an imperfect Onondaga version of the Cosmogonic myth; the Pygmy Myth (English; origin myth of the Dark Dance Society); and a few relatively brief myths referred to before.

Material Culture.

In view of the fact that a complete survey of Iroquois material culture is being made by Mr. F. W. Waugh, of Toronto, I have devoted relatively little time to that subject. Fairly detailed information was secured about the carving of false-faces. I have witnessed and recorded the process of carving. The false-faces are of considerable interest from the artistic point of view. While the range of variability of the false-face forms is fairly wide, there exists a definable limit to such variations. Preliminary notes were taken on the different styles of false-faces as well as on the significance of special features and of the different colours used. These data may serve as foundation to a more elaborate study

of the false-face technique and styles from the artistic point of view. Considerable material was secured bearing on the construction of the ancient bark-house, as well as of the several types of shanties and the later log-house. A peculiar type of fire-place and chimney used in the bark-house, and later in the log-house, were circumstantially described by two independent informants. I also recorded in Oneida text a complete description of the erection of a bark-house, including the felling of trees, peeling of the bark, the preparation of the bark, the clearing of the ground, the erection of the frame, the method of attaching the bark, etc. The process by which a long-house develops out of an ordinary dwelling house, was inquired into with particular care. According to my information, at least two methods must have been used for that purpose. An average family of seven or eight individuals would live in a regular 'dwelling' house with one fire-place and one smoke-hole. As the family increased, by the births of children and through marriages, the house would become too small for comfort and another house would be built adjoining it. In consequence, one of the shorter sides of the original house would either be torn down so that the two houses would actually form one longer house, or the second house would be built so closely to the first that one could pass directly from one to the other. The resulting structure would be a small long-house with two fire-places and two smoke-holes. The process continued until a large long-house with seven, eight, or even more fire-places had developed. When further increase in the population began to tax the capacity of the long-house, a new house was erected, parallel to the first; in the erection of that house the inmates of the long-house were assisted by their relatives.

In conclusion, I want to add that the death of John Gibson, my main informant, necessitates a radical change in the method of my Iroquois work. Whereas in the course of the work to date, it was possible, in fact imperative, to spend about one-half of the time in systematic study with Gibson, whose information on social organization, societies, ceremonies, mythology, was equally vast and reliable, no such concentration of work will henceforth be possible, nor will it be wise to longer delay the extension of the field of operation, so as to include at least the conservative Seneca of New York State.

ON WORK IN MATERIAL CULTURE OF THE IROQUOIS, 1912.

(F. W. Waugh)

Some six weeks or so were spent in January and February of 1912 in making a broad beginning in the subject of Iroquois material culture, in the fullest possible interpretation of the word. This succeeded a brief period spent upon the Grand River reserve in the summer of 1911, in which a general survey of the field was obtained and a few field notes made in various departments. A number of photographs were also obtained at this time.

The period first referred to was spent entirely upon the Six Nation Reserve in Brant county and included as many subjects as could be handled adequately in the time. A third visit of three months or more, beginning with April 8, was paid to the same reservation. The remainder of the seven months, which were devoted during this season to the study of Iroquois material culture, was divided among the reservations at Tonawanda and Onondaga Castle, New York; Caughnawaga, Quebec, and Oneidatown, Ontario. The following were among the subjects investigated:—

(1). Food materials and preparation, in which a beginning was made in the collection of specimens of the materials used, including corn, beans, squashes, gourds, etc., with special reference to native aboriginal foods. These were found to include mammals, birds, fish, batrachians, reptiles, crustaceans, molluscs, and insects. The vegetable foods also included cereals, nuts, and fruits generally; the roots, stems, flowers, and leaves of plants; various products derived from trees; lastly, the orders of the fungi and thallophyta. A considerable mass of material was collected on this subject.

(2). Basketry, a craft which seems to have received a marked impetus in certain directions in response to the white demand, and which is now disappearing rapidly because of the general use of factory-made baskets and the increasing scarcity of the black ash, the material most largely employed. Special attention was given here to styles of baskets employed for home use, or in native industries and employments. It was found, too, that other materials than the ash have been made use of from time to time, and specimens illustrating the use of some of these were obtained. A series of photographs showing the principal steps in basket-making was made.

(3). Transportation, including all devices employed in carrying goods from place to place, or in travelling. There is a marked scarcity of anything to illustrate this at present, with the exception of an occasional pack-basket and strap, a few dug-out canoes, and here and there a sleigh for hauling loads by hand. Not more than two or three types of pack-basket were noted, but specimens of four different types of carrying-frame were obtained, together with models of some five or six different types of sleigh.

Snowshoes are no longer used, except in eastern Ontario and Quebec. Specimens of two old types of these, however, were made by one of the older men at Grand River reserve. Moccasins, also, are seldom used, although a few are still made at Caughnawaga and St. Regis. The baby-board, which might also be mentioned as a carrying device, has practically disappeared, except at one or two points in eastern Ontario. Some information was also gathered on the cognate subject of bridges and bridge-building.

(4). House-building can hardly be called a native industry as practised at present. Modern methods have been adopted everywhere. Even the log-house, the oldest type to be found, is essentially white in design and construction,

with perhaps an occasional aboriginal modification. It was found possible, however, to get descriptions of various types of native bark houses from some of the older men, a number of whom claim to have assisted in their construction. Descriptions of the interior arrangements, and furnishings, the construction of chimneys, fireplaces, beds, etc., were obtained in the same way, also a description of ancient fire-making and lighting devices, with specimens of these. Regarding the still more ancient arrangement of the houses into villages, stockaded or otherwise, practically nothing is now remembered.

(5). Silversmithing seems to have been about the last of the metal-working crafts among the Iroquois, although these were probably never of much importance and consisted principally in the working up of stray bits of native copper, and, at a later date, of scraps of material obtained from the whites. Silversmithing, moreover, as has been shown by A. C. Parker and others, is evidently an adoption of a European handicraft, including both the tools and the designs employed.

At the present time, there are probably not more than three or four Iroquois, either in Canada or the United States, who know anything about silversmithing, and these have practically discontinued the art. Even the kits of tools employed and handed down, in some cases, from one worker to his successor, have been purchased by some of the museums. A couple of workers had purchased new outfits and from these an idea was obtained of the methods used. A few silver ornaments of various kinds were obtained, but many of the designs are no longer to be found.

(6). Mat-making from the husks of the maize or Indian corn gives employment to some of the women, and illustrates an interesting use of a by-product, also the adaptation to modern uses of what is claimed to be an old-time household article.

(7). Tanning was investigated from time to time. It is rarely practised now, but descriptions in detail were taken from a number of old men. Reproductions were made of the principal implements and tools employed, and later on, some of the more important processes were illustrated practically by various informants.

The process, as noted, consists of the soft tanning of large hides, such as those of the deer, with or without the hair; the preparation of rawhide for lacrosse and snowshoe lacings, etc.; and the tanning of furs.

(8). Textiles of native manufacture were found to be very scarce indeed, and probably were never made to any large extent among the Iroquois. At the present time the only articles representative of this department are a few burden straps or 'tump lines', and, in certain localities, a few woollen sashes woven by hand. Specimens of both of these were obtained. The raw material for this class of work was found in plenty and included a variety of vegetable fibres of very good quality, both as to appearance and durability.

(9). The dyes formerly used in colouring splints and other materials for basketry, also for textiles, wood, bone, and for application to the body or face, were found to be rapidly passing into disuse, but, by making inquiries of many individuals, a considerable number of methods were obtained. Many of these were productive of excellent results.

Colour nomenclature was given particular attention in this connexion and, although there is no doubt that much still remains to be done in this direction, more especially by workers in linguistics, some very interesting notes were obtained.

(10). Art among the Iroquois is not developed to any great extent, and seems to have suffered rather severely from modern influences. An intensive study of the subject seems to indicate that utility was uppermost in the economy

of the Iroquois, though much artistic taste in form and decorative design is discernible.

Many of the older materials have either disappeared entirely, or are used to a limited extent locally. All, in fact, have been more or less subjected to change. Beads, for instance, have practically displaced such decorative materials as porcupine quills, moose hair, etc., and even beadwork is rapidly falling into disuse, though a few excellent examples were collected from some of the reserves.

Iroquois art, as it exists today, may be classed under the headings of decorations in relief and those applied to flat surfaces. Very slight use is made of paints or dyes at present, except in basketry and one or two minor articles of use, and in spite of a popular belief to the contrary, considerable taste is shown in the selection and combination of colours. Natural floral motifs or patterns are used quite abundantly in beadwork and applied decoration generally. There are also some very good conventional floral and geometrical designs. The carving and relief decoration found is usually rather rude, but sometimes shows considerable excellence and includes bird, mammal, human, and other forms. This is employed principally in connexion with articles of wood. Much general artistic taste, also, is shown in the matter of woodworking, basketry, and other handicrafts.

(11). Traps and trapping furnished an interesting field of inquiry. Modern contrivances have taken the place almost completely of the older woodcraft, but the transition was evidently not so long ago but that some were still able to give an explanation of the older methods, and to construct models illustrating these. A couple of models of traps for small mammals were obtained in the winter, also a full-sized fish-trap as still used in some localities. During the summer, models of over a dozen traps for birds and mammals were secured. The informant in one instance was a man of not more than fifty years of age, who possessed a most valuable fund of knowledge regarding woodcraft of all kinds. A considerable amount of most interesting information on the subject of fishing and hunting medicines and formulæ was obtained from the same informant, also medicines used to secure success in games and sports. This information was added to extensively by informants at the other points visited, where additional models of traps were also secured.

Other methods of catching eels and fish than by the use of the trap were found to have been practised within the recollection of informants on the reservations visited. These included such methods as spearing, and dragging or driving. Examples were obtained of several types of spear.

(12). Games, whether household, ceremonial, or athletic, were given due attention. A number of these are practically obsolete, though a considerable number are still current. Much insight into Iroquois character may be gained from a study of these. Their athletic games, for instance, give scope for the highest development of both muscle and skill. There are several which are tests in precision in throwing or projecting weapons, some are tests of mental perspicuity, others show a leaning to the grotesque or humorous. Adaptations of European ideas were occasionally found.

Toys might also be mentioned in connexion with games. There were found to be comparatively few of these of strictly native conception. A few were found, however, as well as the usual adaptations.

(13). Weapons, as used at the period of discovery, or earlier, have doubtless been subjected to much change. The examples obtainable at present are few in number and have been retained for special occasions rather than for use. Other weapons and accessories have disappeared entirely.

The bow, formerly used with much skill, remains as an article for holiday use, or more rarely for demonstrations of marksmanship, or for hunting small game. Several more or less distinctly marked types of these were secured for

the museum. Of the tomahawk, some four or five types were collected. The 'hoop and javelin' game and the throwing-stick, both seldom used now, seem to be among the last remaining representatives of the spear or javelin type of weapon. Specimens were also obtained of these.

(14). Medicine in all its branches was gone into as thoroughly as time would permit. This was evidently a very extensive subject, and although some twenty-one or two good medical informants were secured and hundreds of medical prescriptions and formulæ recorded, it cannot be said that the subject was in any sense exhausted. This was to some extent owing to the fact that medical procedure differed slightly with the various practitioners and that hardly any two prescriptions were identical. Most heads of families were found to know anywhere from one or two to half a dozen remedies, and a great many of these were also obtained. Several different schools or categories of medicine were observed. These might be roughly classified as: (1) those making use of medical preparations only, of which the greater part are herbal; (2) those making use of divination and other supernatural agencies in the diagnosis and cure of the disease; (3) those using a combination of magic and therapeutics; (4) those practising witchcraft by means either of medicines or of supernatural agencies; also its cure. Other aspects or phases of Iroquois medicine are represented in the virtues attributed to certain mystical or traditional medicines; the functions of the various medical and secret societies; the use of fetishes and amulets to ward off disease. Informants on medical topics were selected to represent, as far as possible, the different geographical or botanical areas.

A collection was also made of Iroquois fetishes and amulets, as well as of articles used in medicine proper, and in witchcraft. Numerous invocations or prayers and other formulæ were recorded in text.

An interesting series of anatomical terms was given by several informants, one or two of these showing a surprisingly accurate knowledge of structural anatomy.

Another branch of inquiry was the investigation of old customs and the medical or surgical ideas in connexion with pregnancy, birth, puberty, and the menstrual period. The subject is one which could evidently be extended almost indefinitely, but a good foundation, we believe, has been laid, and a sufficient amount of information secured to illustrate the main features of Iroquois medicine.

(15). Musical instruments were found to be fairly numerous, though somewhat crude in type. The greater number of these consist of instruments of percussion for marking the time or rhythm in singing and dancing. The most ambitious instrument, a flute of cedar, was carefully studied as to construction.

(16). Costume was given considerable attention from time to time, both incidentally to inquiries on related topics, and as a special department of inquiry. Much white influence is to be noted here, though many interesting facts were gathered.

Some information was also secured on such subjects as hair-dressing by both men and women, shaving, paints, toilet accessories, etc.

(17). An interesting evolution is to be noted in the transition from bark utensils to those of wood. A fairly complete set of specimens illustrative of this was obtained. Where actual specimens of old-time make were not obtainable, some of the older men were set to making them.

(18). One of the minor occupations noted was the culture of Indian tobacco (Nicotiana rustica). This is raised principally for ceremonial purposes, though it is smoked by a few of the older people. Methods of planting, cultivation, and curing were recorded. Further information as to its use was included with medicine.

(19). Woodworking has evidently been a most important employment of the Iroquois, at any rate since the introduction of steel tools, which also materially improved the quality of the product. At the present time it is falling into disuse from the competition of ready-made articles.

Among the articles which illustrate the skill of the Iroquois in this direction are: canes carved in fancy designs; the handles of stirring paddles and paddles for lifting out corn bread; wooden spoon handles; the bows on baby-boards, the decoration of the latter having been an occupation quite distinct from the making of the boards; the carving of wooden false-faces, which also shows some art, though decidedly grotesque in character. In the investigation of woodworking, not only were the different steps and processes noted carefully, but also the tools, examples of which were secured where any aboriginal feature was noted.

It was noted from time to time that many interesting units of measurement were used in connexion with various handicrafts. This naturally directed attention to numerical and metrical systems in the different Iroquois dialects, which were also recorded. The Iroquois names of plants, animals, the various raw materials used, and of the different steps and processes noted were all recorded as carefully as possible.

A special effort was made to secure photographs of all important features of Iroquois material culture, so far as these are now obtainable. Among the subjects thus illustrated or recorded were: costumes, hair-dressing, basketry, silversmithing, architecture, bridges, the method of drawing the bow, the use of the throwing-stick, fish spearing, fish trapping, woodworking, food preparation and the grinding of corn, transportation, etc. Other photographs taken show typical physiognomies, medical informants, and other subjects.

ON MALECITE AND MICMAC WORK, 1912.

(W. H. Mechling)

During the months of August and September, 1912, I spent six weeks among the Malecite of New Brunswick. Practically the entire time was spent at Fredericton in work with the Indians of the St. Mary's reservation. This year my work was chiefly on mythology and folk-lore, my informant being Jim Paul. The stories collected may be divided into four divisions: stories dealing with the culture hero; stories about supernatural beings, giants, etc.; stories of a more or less legendary character about famous chiefs and warriors, and personal narratives of magic and the obtaining of power. As a result of three summers' field work I now have a fairly complete collection of Malecite mythology and folk-lore, but I regret to say that I have thus far been unable to secure the entire cycle of the culture hero.

I also made a collection of herbs, recording phonetically their Malecite names, and making notes of their use, methods of preparation, and application. I also took the opportunity to obtain data on some points of material culture which were not quite clear from my notes of last year.

My linguistic work was entirely on Micmac this year. I revised phonetically all the texts which I obtained last summer, and went over the translation in order to clear up doubtful points. I also obtained some additional myths in text, and studied some points of morphology suggested by the texts.

ON OJIBWA WORK IN SOUTHEASTERN ONTARIO, 1912.

(*P. Radin.*)

My survey of the Ojibwa Indians of southeastern Ontario extended from March 1 to September 1, 1912. The most eastern settlement visited was Rice lake and the most western Garden river, near Sault Ste. Marie. The final results consisted of a collection of mythology, and diverse ethnological items in text, aggregating about 525 pages; about 175 pages of mythology in English; about 150 pages of ethnological notes; and a similar amount of grammatical notes.

The settlements visited were the following, in the order named: Sarnia, Kettle Point, Walpole island, Rice lake, Chemung lake, Garden river, Manitoulin island (including some places on the north shore of the Northern channel of Georgian bay), North Bay, Rama, Snake and Georgina islands in Lake Simcoe, the Chippewas of the Credit, and the Chippewas of the Thames. A trip of a few days was also made to the Algonquins of Maniwaki, Que. It was unfortunately impossible to visit the Ojibwa settlements of Chippewa point, Cape Croker, Parry Sound, and those scattered between Parry point and Lake Nipissing.

In none of the places visited was the old ceremonial life of the Indians in force any longer, and for that reason it was found necessary to confine the investigation to those phases of Indian custom and belief which are still remembered to a considerable extent, namely: mythology, folklore, magic and witchcraft, and religious and general ethnological practices. What the writer obtained on these subjects is only a fragment of what can still be obtained by a longer sojourn among these people. Particularly advantageous for a more intensive study are the reserves at the Thames, and Walpole island, where a small but energetic minority of Indians are still pagan.

The results of the survey naturally fall into the following headings: the former home of the southeastern Ojibwas; their language; their mythology; their religion; and their general ethnology.

(1). *Former Habitat.*—All the Indians in the settlements visited were one in declaring that they entered Canada from the United States, and that they came from Michigan either by way of Detroit or Mackinaw straits. From this statement the Indians of Rice and Chemung lakes, and of Snake and Georgina islands must be excluded, as well as those of Rama, who claim to have come from the north. The Garden Lake Indians represent two groups, one coming from the north, the other from the United States. The correctness of these statements is borne out by the difference in the dialects of the Garden River and Rama Indians, and the other settlements, which, while it is not of a far-reaching nature, is sufficiently constant and distinct to be significant. Strangely enough, the Indians of Rice and Chemung lake, who unquestionably came from the north, speak the same dialect as the settlements of Sarnia, the Thames, etc., although one might expect them to belong to the Garden River-Rama group. These Indians, who have had a history independent of either the Garden River-Rama or Sarnia-Thames group, are generally known under the name of the Mississauga.

(2). *Language.*—The language is practically the same throughout the whole area, but besides a difference in vocabulary, which seems purely of a local nature, there is quite an interesting phonetic difference between the Sarnia-Thames and the Garden River-Rama group. The former drop all initial vowels except under certain conditions, and in rapid speech, the ordinary speech of conversation,

drop many of the vowels between consonants, thus giving rise to quite a number of pseudo-consonantal clusters. The latter do neither of these things, and in this characteristic seem to belong more to the western group of Ojibwa, whose language has been described by Baraga.

(3). *Mythology.*—The myths collected are typicallv Woodland and are similar to Menominee and Ojibwa collections that have been published. The Trickster Cycle, with Nenebojo as chief character, is quite prominent. Stylistically they seem to prefer the long story, but there seems to be no tendency at all toward long and unified cycles, as among the Winnebago and Iroquois.

(4). *Religion.*—Their religion is that characteristic of the Woodlands, the most important phases of which have been described by William Jones in his article on 'The Concept of the Manitou' (Journal of American Folk-Lore, vol. 18, 1905). Puberty fasting and the obtaining of a personal guardian spirit is the most prominent element of their religious beliefs. I have described the most salient characteristics of this belief among the Ojibwa in a little article, about to be published in the Museum Bulletin.

(5). *General Ethnology.*—The unit of social organization was the clan, which generally had an animal name, although two clans with plant names were found, Birch and Birch-bark. Individuals did not often have animal names, nor do these or the other personal names seem to be connected in any way with the clan animal. No taboos of the clan animal existed, although that of the guardian spirit was very strong. On the whole, the clan unit does not seem to have been very strong, and in this respect shows a marked contrast to that of the Menominee and Sauk and Fox. One exception must be made to this general statement, namely, the clan unit of the Mississauga, which appears to have been strongly influenced by their contact with the Iroquois. The Mississauga have twelve clans and a fixed set of clan names for each clan. Unfortunately only a few of these could be collected at this late date.

In former times, both the Midewiwin and Calumet dances were practised. About the latter, I could obtain no definite information, but the notes obtained about the former seem to indicate that the Midewiwin in this region consisted of a very loose ceremonial unit, and that to all intents and purposes it was little more than a more or less informal meeting of shamans.

The above investigation was undertaken as a preliminary step toward a complete survey of the many divisions of the Ojibwa.

ON TAHLTAN (ATHABASKAN) WORK, 1912.

(*J. A. Teit.*)

As a commencement of an ethnological survey of the northern Athabaskan tribes in British Columbia and Yukon territories, I made a trip to the Tahltans of Cassiar district, B. C., from August 15 to November 1. Time occupied in travelling, and unavoidable delays en route, curtailed the period of actual work among them to some forty days. Within this time, however, I made very fair progress, collecting about 450 pages of information on general ethnology, mythology, traditions, language, etc. I also collected 61 songs, and some ethnological specimens, chiefly bags, tools, etc. Certain material from the tribe had already been published, viz., 'Notes on the Indian tribes of the Northern portion of B. C.,' by Dr. G. M. Dawson (Annual Report of the Geological Survey of Canada, 1887); 'The Nah'ane and their Language,' by Father A. G. Morice (Transactions of the Canadian Institute, 1903); 'Notes on the Tahltan,' by J. A. Teit (Boas Anniversary Volume, 1906); 'Two Tahltan Traditions,' by J. A. Teit (Journal of American Folk-Lore, 1909); and 'The Tahltan Indians,' by Lieut. Emmons (University of Pennsylvania Publications, 1911). The last is a valuable contribution, and comparatively full. The information I collected on the trip covers a wider range, and on the whole is much more in detail than what has hitherto been collected. However, more remains to be done.

Linguistically the Tahltans are a part of the Nahani, an Athabaskan division occupying most of the extreme northern interior of British Columbia west and east of the Rockies, and some adjoining parts of Yukon Territory. The northern and eastern Nahani appear to be composed of a number of loosely connected and slightly organized bands, nomadic in character, and conforming in general social conditions to the average type of the northern Athabaskans. On the other hand, the western branch of them, known as the Tahltans, have the status of a distinct and independent tribe, have a strong social organization, are semi-sedentary, and differ a good deal in general culture from their congeners farther inland. They have traditions that they are of diverse origin, some of their ancestors having come from the north and south, others from the east. They also claim that there have been migrations from among them to the coast, and vice versa, and that at least part of the Tlingit are thus of Athabaskan descent. They agree that the Tlingit formerly extended farther south along the coast, and also occupied from time immemorial a considerable part of the interior north of the Tahltans, including most of the drainage basin of the Taku, and nearly all the northwestern headwaters of the Yukon, north almost to latitude 62 and east to the Pelly mountains and the height of land dividing Teslin waters from the upper Liard.

The Tahltan tribe for long has had intimate intercourse with the Tlingit, and no doubt has been powerfully influenced by them. Their social organization appears to be based largely on that obtaining among the Tlingit. Like the latter, they are divided into two exogamous phratries called Wolf and Raven (the former is said to represent the original Tahltan people). Children belong to the phratry and clan of their mother. Each phratry consists of three clans or gentes, each of which has a hereditary chief and a territory of its own. These six chiefs form the governing body of the tribe. The names of the clans are geographical, and in origin they were probably mere local divisions or bands of the tribe. The clans do not have special totems, nor traditions deriving their origin from mythological ancestors. Crests and totems usually belong to the phratry. A seventh clan exists at the present day, having originated about 150 years ago through

immigration of and intermarriage with the Tlingit. It belongs to the Wolf phratry, but has no recognized territory nor chief within the country of the Tahltans; it is called by its Tlingit name. There is an aristocracy of rank and wealth, but these nobles have no special rights in hunting grounds, fisheries, etc. Methods of obtaining rank, the potlatch, and many of the social and ceremonial customs of the tribe are clearly adopted from the Tlingit.

The Tahltans made most of their implements of bone, horn, and wood. Stone was not much utilized, excepting obsidian for arrow, spear, and knife points. Tools of serpentine, jade, and copper appear to have been obtained from the Tlingit. No matting or woven basketry was made, while bark basketry was made to a limited extent. Bags were used very extensively, and were of various kinds. Most of them were made of skin dressed with or without the hair, but some were of babiche, sinew twine, and woven or netted goat's wool twine. Robes of woven strips of rabbit skins were made.

Lodges were of the single and double lean-to types, mostly the latter. They were roofed with poles laid close together, and sometimes further covered with brush, bark, and earth or snow. No conical lodges were used, nor semi-underground dwellings. Large houses built of poles and bark were used for drying salmon, and also as dwellings during the fishing season. They were similar in shape to some of the plank houses of the Tlingit.

Probably owing to exigencies of climate, the Tahltans borrowed but little in the way of dress from the Tlingit. Their every-day dress was of the Interior and Athabaskan type. However, much of their ceremonial and dance costume was Tlingit. Porcupine quill embroidery was done on clothes and bags, and shells obtained from the Coast were much used for personal adornment and ornamentation in general.

Roots and berries were not very important items of the food supply, as among the tribes in the southern interior of British Columbia. The flesh of game animals and salmon were the all important staples. Fish were caught with traps (of several kinds), nets (formerly made almost altogether of sinew twine), and spears (generally of the single point harpoon variety); game was snared and trapped, and also hunted with bow and arrows. The latter were of Athabaskan types.

A sign language was in vogue, especially among hunters. Snow-shoes were much used, the fillings being of babiche and sinew twine. It is said that very long ago the people did not know how to make them. Dogs were not used for hauling sleds and carrying loads until recent times. Formerly they were utilized only for hunting. As the Tahltans occupied an important geographical position for trading, they engaged much in this avocation, acting as middlemen in the exchange of commodities between the coast and the tribes farther inland, making profits both ways. Wars appear to have been engaged in only with the Upper Naas people, and with the Tlingit of Taku river. Scalps were taken, and a scalp dance held, but there seems to have been no war dance preparatory to going to war.

Puberty ceremonials appear to be rather strongly developed, and on the whole are quite similar to those obtaining among the Interior Salish (particularly to the customs of the Thompson River Indians regarding girls). A whipping custom was prevalent, and is also similar to that found among the Thompson River Indians. Marriage customs seem to resemble those of the Tlingit. At least for a long time back the dead have been disposed of by burning, the charred remains being gathered up, and usually placed in a receptacle on the top of a low post.

Some of the Tahltan beliefs are very interesting. The earth is thought to be circular, and to be surrounded by salt water lakes. The sky is dome-shaped, and hangs over the earth like an umbrella, the edges touching the waters all around. The sky revolves sunwise, while the earth is considered stationary. At the edges

of the earth the weather is always chilly. Some think that above or beyond the sky there is another earth, which is inhabited by birds. Possibly the sky is the floor of this other world. There is also a belief that the earth is animated and the same as the mother of the people, while the sun is masculine and the same as their father. The sun was formerly prayed to, and traces of sun worship abound. The earth we tread is like a crust, or skin or blanket, which is held up by the earth mother, who is like a post that supports it. When she gets tired, she moves her position, which causes an earthquake. She is becoming older and weaker all the time, therefore the earth is not so high as formerly, and is sagging down into the waters. Some day she will be unable to hold it up any longer. She will fall like a rotten post, and the earth will drop down and be submerged. There is also a belief in the meat-mother, who gave birth to all the animals and still controls them. The moon and stars are transformed beings. Wind is the breath of people, viz., a cold people who live in the far north, and a warm people who live in the south. When they speak, cold and warm winds blow over the earth. Thunder is a bird, and the noise of thunder is caused by the flapping of its wings. Its armpits are red, and when these are exposed by the extending of its wings, the red is seen as lightning. The Tahltan believe in several kinds of supernatural beings, including one or two races of wild people, cannibals, giants, water people, and a kind of gigantic toad. According to some, snow and rain are made by the moon. There is a strong belief in the rebirth of souls. A deceased relative is often born again by a mother, aunt, sister, or other relative. Witchcraft is believed in, witches being a class distinct from shamans. The dead go to three different places: a rather cool, dingy place underground to the west; a light agreeable place on the same level as the earth to the east; and a place above in the sky. Only people killed in battle go to the last. Sometimes they come out, and dance as the aurora. When the latter consist of red clouds, people say there is war somewhere. When the streamers of the aurora descend, forming a kind of chute, it is said the spirits are receiving a brave warrior whose soul ascends through this chute, and is borne away as the streamers ascend. The sky heaven is said to be the best abode. That to the east is somewhat like this earth, but better in so far as food is always abundant. Most people go to it. They have to descend a slippery hill, and cross a river. Some are afraid, and turn back to be reborn again, or wander about until they finally reach the place of shades in the west, where conditions are not as good as in the other places, and food is often scarce. It is interesting to note the presence of riddles among the Tahltan, a feature that has not often been reported for North American tribes.

Although there are some striking resemblances, I found the customs and beliefs of the Tahltan to be considerably different on the whole from those obtaining among the Southern Plateau tribes (Interior Salish). I collected a considerable number of mythological tales. Most of these are short stories, the only one of considerable length being that of Big Raven. All the stories of the Raven cycle, as well as many others, appear to be of Tlingit origin. On the whole there is little analogy between the tales of the Tahltan and those of the Interior Salish. The story of the Snake Lover was told in practically the same form as among the Thompson River Indians, and a few incidents in stories were the same as, or related to, those occurring in the south. Most of the songs I collected were Tahltan, some of them said to have originated with or been composed by people of the tribe. I also obtained a series of songs belonging to the Bear Lake Sekani, which is interesting in that they differ on the whole from the Tahltan music and appear to have more melody.

I did not have time to deal extensively with the language, which has a musical cadence and is rather difficult in its phonetics. Father Morice says of it, 'Besides their accent, the Nah·ane have, when speaking, a particularly marked intonation.

This is so pronounced, it could almost be compared to a song.' Again he says, 'to sum up, the Nah·ane language is much less complicated, and verbally poorer than the Carrier. It is also less pure in its lexicon, more embarrassed in its phraseology, and, owing to its accent, even more delicate in its phonetics.' To the north, east, and southeast of the Tahltan is an immense area thinly inhabited by Athabaskan bands, the dialects, customs, beliefs, and mythology of which are very little known.

ON ESKIMO WORK, 1908–12.

(V. Stefánsson)

The second week of August, 1912, I landed in Seattle from a four years' scientific expedition in the Arctic regions of Canada and Alaska. Such fragmentary reports as the opportunities allowed I had from time to time been sending to the Survey; just now, without any particular reference to these, I shall attempt a short general summary of the work of the entire expedition.

The financial support of the expedition was shared by the Survey with the American Museum of Natural History in New York. It was considered possible we might find on the north coast of the American continent, in the region of Dolphin and Union straits and Coronation gulf, Eskimo who had never come in contact with white men. The study of these people, if they should be found, was to be my own province, as well as the ethnological study of any other primitive people with which the expedition might come in contact. During the summer months we expected to do such archæological work as the conditions permitted and collections of linguistic notes and folk-lore material were to be made wherever practicable. The secondary aim was the zoological study of whatever regions might be traversed for ethnological purposes. This branch of the work was under Dr. R. M. Anderson, the well known zoologist, who was my only white companion in the work. It gives me pleasure now to report that the expedition has been successful in every particular. We discovered several tribes of Eskimo who had not, neither they nor their ancestors, ever come in contact with white men, so far as they know or so far as we know. Among these people we have made ethnological collections that are complete with the exception of kayaks and two or three other articles. Kayaks were in existence, but not in common use, while of many of the smaller and commoner articles we secured numerous duplicates. Our archæological collections embrace the entire north coast of America, from Point Hope and the Diomede islands to Victoria island. Some of the points which I believe these archæological collections will go to establish are the following:—

(1). The Eskimo came to Alaska from the east and reached Bering strait in comparatively recent times, probably less than a thousand years ago. This opinion was, I believe, generally held before the time of our expedition, but we discovered many facts which materially strengthen that conclusion.

(2). Our excavations of house ruins and middens have shown that pottery was abundant in the earliest times of Eskimo occupation of the country as far east as Cape Parry. This is a contribution to knowledge of some importance, for it was previously commonly believed that the Eskimo had acquired the art of pottery making in recent times from the Indians in western Alaska. No museum had any pottery from farther east than Point Barrow and from that place only a few broken specimens had been obtained. It has, therefore, been considered that Point Barrow was the eastern limit of the potter's art, and some even believed that these specimens gathered at Point Barrow had been brought there as articles of commerce from Kotzebue sound.

(3). Our archæological work at various points on the coast from Cape Parry west and north to Point Barrow has shown that fish nets and tobacco pipes came in at approximately the same time from the west.

(4). The fashion of wearing labrets is shown to have preceded pipes and fish

nets by only a short period of time. The earlier type of labret was the oblong one worn in the centre of the lip, while the later type, subsequent to the introduction of tobacco pipes, is the modern round type worn under both corners of the mouth.

(5). The excavation of two village sites near Point Barrow indicated, among other things, that certain Eskimo traditions are, so far as they go, reliable. One of these villages was said to have been abandoned at the time that the other was first settled, and this was borne out by finding in the older site types of implements, which, while abundant there, were either rare or absent in the newer village. The abandonment of this site for the other one coincides approximately with the coming in of fish nets and pipes.

(6). The collection of stone lamps and stone cooking pots establishes the fact that those made of a certain type of potstone (steatite) came from quarries located about a hundred miles east of the Coppermine river. They must, therefore, have been carried as articles of commerce west along the coast even to Siberia, a fact which is also a matter of common knowledge among Eskimo still living. In other words, each tribe knows that its lamps and pots were secured from the next tribe east of them.

These are merely some of the broader generalizations which even a hasty examination of the collection will bring out. The less comprehensive, but equally significant facts concerning the collection can be brought out only by detailed comparative study of them.

The expedition, after reaching the Arctic by way of the Mackenzie river, spent the summer of 1908 in moving west along the coast, and during the following winter the main base of operations was on the Colville river. During that time sled journeys for the purpose of ethnological investigations were made as far west along the coast as Icy cape. Extensive collections of folk-lore were made and vocabularies recorded, chiefly at Point Barrow. The main part of the zoological work of this winter consisted of Dr. Anderson's expedition from the vicinity of Barter island south across the Endicott mountains for the purpose of securing mountain sheep and caribou, neither of which animals had ever been taken for scientific purposes in this district. He secured specimens of caribou and mountain sheep of both sexes and all ages, besides numerous examples of the smaller mammals and birds, while the collection the following spring included the eggs of most birds that nest in this portion of the Arctic. The summer of 1909 the expedition proceeded east along the coast, and the winter of 1909-10 was spent in the vicinity of Cape Parry, partly along the Horton river, and partly out on the tip of the cape itself. We found here, as well as in some other places, that the tree line differs from that of the charts issued by the Canadian Government. We also made numerous other corrections in the chart, perhaps the most important of which is the extension of Harroby bay, so that it lacks but a mile of cutting the peninsula of Cape Bathurst in two. We also showed that the River La Roncière is non-existent, that Horton river is a comparatively large stream, and that all the other rivers shown by Richardson as falling into Franklin bay are really nothing but small creeks, the longest of them being less than 10 miles in length. At several times during the winter of 1909-10 both Dr. Anderson and myself, as well as nine Eskimo of our party, had to go for some time without ordinary food and at one time we were compelled to eat up all the large mammalian skins which we had the previous year gathered together for scientific purposes. Dr. Anderson and one of the Eskimo also suffered a mild attack of pneumonia, which might have proved serious but for the fact that it occurred at a place where we had some provisions stored up. During this winter also most of our dogs died from a contagious dog sickness.

This winter had been spent about 100 miles east of the most easterly civilized community of the Eskimo. The country to the east of us was unknown

to us except for vague accounts which they had from their ancestors of the times, perhaps a hundred years or more back, when they used to associate with the tribes to the east. In the latter part of March, Dr. Anderson, who was then almost fully recovered from his severe illness, undertook the journey of 500 miles west to Fort Macpherson and Herschel island for the purpose of getting the mail which we hoped that whaling ships would bring in for us and to get certain stores, chiefly ammunition and writing materials, that had been sent to us through the whalers and through the Hudson's Bay Company. One of our Eskimo families was left behind near Cape Parry to take care of the scientific collection which had already been made and stored there.

I myself and three Eskimo started east along the coast on April 22, 1910, in search of the people which I thought might possibly exist somewhere along the Dolphin and Union Straits coast to the east. At first, for 100 miles or more, we found ruins of houses of wood and earth such as the western Eskimo build, but none of these were recent. The most easterly one that we happened to see was near the mouth of Crocker river, and it is probable that this was nearly the eastern limit of the wooden houses, for we found no traces of such structures anywhere near Coronation gulf. When we reached Point Wise, we found chips of wood cut from broken sticks with adzes, apparently not more than eight or ten years ago. As we proceeded eastward these became fresher and fresher until at Cape Bexley, on May 13, we found a deserted village of over fifty snow houses. This village, as we learned later, is the trading rendezvous for the various tribes of the neighbourhood in the autumn, and is usually abandoned about or before Christmas each year. Some trails lead east of this village, but most of them lead north across the sea out towards Victoria Land, which is in plain sight at this point, for the straits are only a little more than 20 miles wide. In the middle of the straits we found an encampment of thirty-seven Eskimo, none of whom had, either they or their ancestors, ever seen white men until they saw us—at least that is true so far as they know themselves and so far as I know from available literary sources. They had never seen Indians either, although they had dealt with other tribes of Eskimo who had seen Indians and although they had themselves occasionally seen traces of Indians on the mainland to the south. We found these people hospitable, well-bred, and altogether desirable men to live with, and began pleasantly on the first day an association of over a year which gave me unusual opportunities as an ethnologist of studying people uncontaminated by white influences. As a comprehensive report of our life among these Eskimo is to be issued in the future, I shall content myself here with the broadest generalities.

The inhabited country of which we were able to gather information comprises the southern end of Banks island, the southern half or two-thirds of Victoria island from Walker bay on the west coast to Albert Edward bay on the east coast, and the mainland from Kent peninsula to Cape Bexley. We did not ourselves visit the tribes that live in the western half of Victoria island nor those that live on the mainland east of Grey bay, but we talked with many individuals from these tribes who were visiting others. The fairly accurate knowledge of the people we dealt with extended as far east along the coast as King William's Land and as far west only as Baker lake. We found that their summer range is much farther south than had been previously known, for they wander over the entire country north of a straight line drawn from the south end of Bathurst inlet to the east end of Great Bear lake, as far west as the Dease river, which, however, they only occasionally cross. Though they migrate over belts of timber, they seldom stay in or near them, apparently, no doubt, through mistrust of the Indians, whose general whereabouts are known to the Eskimo, though no unfriendly contact had taken place. In our acquaintance with the Bear Lake Indians, I found that their fear of the Eskimo is far more intense than the Eskimo's fear of the Indians.

We saw rather less than a thousand individuals out of the total estimated population of a little over two thousand in the area described. They were in a prosperous condition as compared with the civilized Eskimo with whom we were familiar to the west. That is, they were better dressed, better fed, and had fewer wants that had to go unsupplied. The contrast in bodily health was striking. Whereas the civilized Eskimo to the west have, for the last half century, had a death rate so far exceeding the birth rate that the population of certain districts has been reduced to less than three per cent of that of 1848, it seems that these eastern Eskimo had a birth-rate equal to, and perhaps a little exceeding, the death rate. The typical village of two hundred inhabitants investigated had only two persons who were considered to be sick. One of them had suffered for two years of chronic dysentery, the other had been blind for seven or eight years. The contrast can be seen by comparing this village with a typical village of the civilized Eskimo, such as that at Baillie island. Here last year six died and three went insane, while about half of the remainder are seriously and obviously sick. In this same tribe I frequently purchased for scientific purposes every stitch of clothes a man had on at the time I saw him and in every case he had another complete set ready to put on and usually one quite as good as that which I had bought. Many had three or more complete changes of clothing, while in the civilized communities few men had even one decent suit of clothes.

The contrast in manners and customs was equally marked. The civilized Eskimo are inquisitive, always prying into your baggage or other property, generally prone to beg, and entirely without gratitude in the matter of presents. The uncivilized Eskimo made no impertinent inquiries, never tried to pry into our baggage, never begged, and always insisted on paying for whatever they got. As we proceeded east along Coronation gulf we came to tribes who had heard a good deal about white men from other tribes still farther east and some of them were inquisitive and inclined to beg. They told us that that was because they had heard from their neighbours to the east that white men liked to be so treated and expected to give things for nothing, which, they admitted, was not their custom.

Private ownership applies to all made articles and to raw materials that have been picked up or carried to a distance, but all sources of raw material and all food are in common. Skins of caribou and small seals (foetida) belong to the man who killed them, but the skins of large bearded seals (barbata) are shared among the men within sight at the killing. The flesh of the bearded seal is divided between the same families that get the portions of the skin. While they keep the skin, they give away a large part of the meat after it is cooked, so that the successful hunter's wife has the work as well as the honour of preparing the food and giving it away, while all share alike in the consumption of the food.

The clothing is preferably caribou skin at all seasons, but some of the tribes, notably those who hunt on the south of Dolphin and Union straits, are short of deer skins and have to use seal, marmot (spermophilus parryi), wolf, fox, and hare. Special rain-coats are made of seal skin for summer wear and boots coming to the knees are also sewn of this same material. The shoes worn at all seasons on snow, ice, or dry land are of seal skin. The skin of the bearded seal is used for stout thongs and that of the small seal for more slender ones. The best lines, such as fish lines and bow strings, are of braided sinew, preferably of the hind legs of caribou, while the back sinew of caribou is used for ordinary sewing.

The weapons of the people consist of the harpoon similar to the ordinary Eskimo type and made in some cases of native copper and sometimes of iron. The spears used from the kayak against caribou at the swimming places are usually headed with copper. The fish hooks are always of copper and the arrow points generally, although both stone and iron occur. The knives are double edged

with the handle of antler long enough for grasping with both hands, while the blade of copper or iron may be anything from 3 to 10 inches long. These are the hunting, housebuilding, or snow knives, while the ordinary form of crooked knife for whittling is not used. Most individuals had been able to secure iron for this very useful tool, although we found a few who were able to get nothing better for the blade than native copper. Much of the iron in use had come from McClure's ship, the *Investigator*, which the Eskimo discovered apparently a year or two after she had been abandoned in the Bay of Mercy on the north coast of Banks island. For something like thirty years the Eskimo of western Victoria Land used to make visits to the Bay of Mercy to secure iron, but at the time when men now barely full-grown were babies the supply of iron had given out, for the ship had been carried off to sea and broken up and nothing was left except the anchors and chains, which were unworkable with the primitive tools of the Eskimo. Pieces of the wreckage of the ship were found scattered, we were told, along the shores of Prince of Wales strait as far south as Pimento inlet, which throws an interesting side-light on the ocean currents in this quarter. The bows used in the hunting of all game except seals are of three pieces (Tartar type); the wood is spruce, but pieces of antler are used to strengthen the bow at the joints, and most of the springiness is furnished by a rope of twisted sinew on the back of the bow. The effective range of the weapon is about seventy-five yards, while the extreme range may be put at one hundred yards. At fifty or even at seventy-five yards the bow is an effective weapon. An arrow will in many cases fly a considerable distance on the other side after going through the chest of a wild caribou or even a polar or grizzly bear.

No permanent dwellings of any kind are erected by any of the Copper Eskimo —I call them so because every geographical descriptive term is either too large or too small and copper furnishes such a characteristic and important part of their material equipment. In winter they live in snow houses of the ordinary dome type, in villages of from three to thirty-three dwellings. Thirty-three is the largest number of houses I have ever found occupied by people who consider themselves members of one group, although at a trading rendezvous such as Cape Bexley larger numbers of houses are sometimes simultaneously occupied. A large house will accommodate two families of a total of nine or ten individuals, while five is perhaps the average number. In some cases adjoining houses have an interior connexion between them and in still others the outer door opens into a common hallway on either side of which is a door to the private houses. The exigencies of seal-hunting are such that a house is seldom occupied more than three weeks at a time, so that it is always vacated before it has a chance to become filthy. Apart from that, these Eskimo are really fairly good housekeepers. The net result, as to health, from living in these well ventilated and comparatively clean temporary dwellings (and tents in summer) is that the general health of the people is good, and pulmonary diseases in particular seem to be nearly or quite absent. This, of course, will all change very soon, when white men commence to live among them, for the tribes who at present are migratory will then become sedentary and will occupy the same dwellings the year round, as they do now wherever civilization has been planted.

In spring, perhaps about the 15th or 20th of May, usually, or a little earlier than that in Coronation gulf, but a little later in Prince Albert sound, the sun becomes so warm that the snow roofs of the houses cave in and they are then replaced by caribou skins, or seal skins if caribou skins are not at hand. Some time during the month of May the people move ashore from the snow villages which they have been occupying for nine months. When they reach the shore, or on the way at some small island, they will cache their stores of seal oil, their spare clothing, their heavy and valuable property, and, dressed only in nearly

worn out clothing and carrying practically nothing with them, they go north to Victoria island or the mainland in their search for caribou. A few tribes depend to some extent upon fish for their summer food. This is true notably of the Ekalluktogmiut of Albert Edward and the Akuliakattagmiut of Cape Bexley. The latter of these people spend their summer upon the lake south of Cape Bexley, from which they draw their name. This lake is the source of Rae river. Eggs also play a small part in the food supply of certain tribes and marmot in that of others, but in general all tribes depend in the main upon the caribou. A few of these are speared in swimming places by the mainland Eskimo that hunt south towards Bear lake, but most of them are killed by being driven into ambush or stalked in the ordinary way and shot with bow and arrow. Whenever more animals are killed than can be immediately consumed, the meat is cut up in thin slices and spread out to dry. When it is half dried, it is covered with heavy stones for safe keeping and abandoned by the people to be picked up again in the autumn. In general each tribe moves farther and farther inland as the summer advances and tries to leave behind it a trail of these caches of dried meat. Finally, when the snow overtakes them in the autumn, they return over the old route to the sea, picking up the caches as they go. Occasionally, where safe caches cannot be made, where an abundance of meat is gathered together, a single decrepit person is left behind to guard the meat depot until the return of the party.

The main importance of the summer hunt is not in storing of food for winter but rather in the securing of skins for winter clothing. For this at the present time the caribou are in sufficient numbers in the hunting districts of all the tribes, but the time is, of course, not far distant when this will all change. At present they live for nine months on seal, of which there is an inexhaustible supply in the ocean, and for three months on caribou, of which there is an abundant but soon to be exhausted supply, for when the traders bring in rifles, as they are beginning to do, the Eskimo will learn that caribou are easier to kill in winter than seal, and after a period of a few years, they will commence living for the twelve months through on caribou. Even if there were no wasteful killing, this would at least quadruple the destruction of the caribou. At present, too, each Eskimo has but one dog, because he finds it difficult to support more, and he needs but one dog for successful seal hunting. The dog with the Copper Eskimo at present is a hunting rather than a draught animal, although he is used for pulling sleds and for carrying pack loads on occasion; but when the rifle begins to make the killing of caribou easy, people will find that the support of dogs is also easy and large teams will be developed. It was so at Herschel island and at Baillie island, where men who forty years ago had a team of two dogs, ten years ago had typically at least two teams of six dogs each, which number has now again been cut down by the disappearance there of the caribou and the impossibility of supporting dogs on the scale of a few years ago. This increase of dogs, then, in the Copper Eskimo territory, will also increase the consumption of caribou meat, so that, if we make no allowance for it and for factors already considered and for a slight degree of wasteful killing or killing for pure sport, it is probable that the destruction of caribou will within the next ten years be increased tenfold over the present annual rate. This will mean a swift extermination of the caribou and the consequent impoverishment of the Eskimo, who are now well and warmly dressed but who will then be in a still worse condition than the Mackenzie Eskimo are now, for the natural trade resources of their country are less than those of the Mackenzie district and they will have less possibility of buying blankets and other substitutes for the reindeer skins.

The Copper Eskimo in their social organization may be described as anarchistic communists. There is absolutely no government in the sense of one man having authority over others by virtue of office or rank. Men have influence

in proportion to the general opinion of their intelligence and prowess. A man's influence, therefore, grows toward middle life and declines rapidly with age. Socially the sexes are equal. Women join in all discussions and are in every way treated with as much respect as men. In marriage relations they also are on the same level with their husbands, and theoretically a woman is always free to leave her husband when she wants to and he is, of course, equally free to leave his wife. Practically, however, we have seen cases where a woman who wanted to leave her husband was frightened by him into not doing so, for, along with the doctrine of equality is the doctrine of non-interference in the family affairs of others. Quarrels occur, and murders. These are followed by vendettas, which have no logical ending except in the splitting up of a tribe and the moving to a distance of all the members who composed one family or group of blood relatives. There is no punishment for crime except that a man who becomes intolerable is killed, but public opinion is very strong and the displeasure of the community acts in fact as a punishment. The force of public opinion is much stronger and much more keenly felt among the Eskimo than it is among us.

The language of the Copper Eskimo differs from that of the Mackenzie district somewhat more than the Mackenzie dialect differs from that of Point Barrow, but not so much as the Mackenzie dialect does from that of the inland Eskimo of Alaska. The difference is, in general, in the direction of the Greenland language. The difference between the Copper dialect and certain dialects of Greenland seems to be about the same as that between the Copper dialect and the Mackenzie dialect. The difference is naturally shown not so much by a different vocabulary as by grammatical or sound changes; for instance, the Mackenzie River 't' of verbs in the indicative mode appears as 'p' in Coronation gulf and Greenland. A curious thing is that although the Alaskan Eskimo and Greenland Eskimo can in general count up to twenty twenties or 400, the Copper Eskimo cannot count above six and, indeed, there are very few who can count that much. As a matter of practice, the word signifying 'many' is used for all numbers above three and in many cases for all numbers above two. In speaking of the killing of the caribou, for instance, a man will usually say that he killed many if he killed anything more than two, and the same applies to the announcement of the appearance of a band of caribou on the sky line; it will be one caribou, two caribou, or many caribou. The inflection of the language, however, will always give the number up to three, for all nouns appear in the singular, dual, and plural.

The religion of the Copper Eskimo is essentially the same as that of other groups east of Alaska. In other words, they seem essentially uninfluenced by Indian elements. There is no superior spirit nor are there in fact any spirits that are considered of higher rank or greater power than other classes of spirits. The several classes of spirits seem to differ chiefly in the physical form they take, in the clothes they wear, and in the places they inhabit. There are, for instance, spirits of the tide cracks and spirits of the air. There are also white men's spirits and Indian spirits, which do not seem to be identified with the souls of white men or Indians, but rather seem to be considered as spirits whose outward attributes are the same as those of white men or Indians. The tribes who had never seen white men nevertheless had all heard much about them from the east, and there were in each shamans who had white men for familiar spirits and who claimed to know the white man's language and to speak it in dealing with their familiar spirits. I heard a shamanistic performance of one of these and the language spoken was evidently a meaningless jargon and had no resemblance to any European language, for the characteristic sound was the 'tl' element of the Athabaskan Indians and the Mexicans.

There is great unclearness in all matters of religious thinking and none seemed to really know whether all these spirits were in the employ of shamans, although

some expressed their private and personal opinion to the effect that there were no spirits who had other masters in any human being. There are, however, some enchanted spirits which some do not explain at all and some explain by saying that they are the spirits of shamans who have died and left them without a master. Each shaman usually has more than one familiar spirit and many have five or six. These spirits differ in power, not according to what kind of spirit they are, but according to individual traits, exactly as men do. In other words, two shamans may each have for one of his familiar spirits a dweller in the tide cracks, one of which may be able to cure an illness that the other can do nothing with. Sickness is never thought of as being occasioned by natural causes but always as being the work of some shaman or evil-minded person who possesses a powerful spell or charm. When anyone is taken sick, the first thing, therefore, is to determine who made him sick and in what manner. A shaman is engaged and undertakes a séance. At first he dances and sings in his proper person but all of a sudden his attitude changes, his voice undergoes a transformation, and it is understood that he has been entered by one of his familiar spirits, who thereafter speaks through his mouth. Any reply to questions asked by the bystanders is possible in the form of a monologue, and the spirit explains why the person is sick and how he can be cured. Sometimes an evil spirit has been sent from a tribe in a different part of the country and has entered the patient. In that case, it must be driven out by powerful spells. In other cases, especially if one of the symptoms is a chill, it is believed that the soul of the sick man has been stolen and hidden somewhere. It is then the task of the shaman's familiar spirit to go all over the earth and look for the hidden soul and to bring it back. Success in this quest is shown by the recovery of the patient, while failure is indicated by a continuance of the illness or by death. Certain things and conditions, but notably the presence of blubber or other fat, make all spirits powerless, and if a stolen soul, for instance, has been hidden inside of a greasy bone, it cannot possibly be found, because a familiar spirit cannot look for it in any greasy place.

Many folk tales found among the Copper Eskimo are also found in Greenland and Alaska in their entirety. Others are represented both in Greenland and Alaska by certain combinations of elements which go to make them up, but which are combined in different ways in different districts. The game of cat's cradle and many other games are played by the Copper Eskimo in ways similar to those of the Alaskans. Cat's cradle games and the telling of certain stories are confined to the time that the sun is away in winter. The winter, except in times of scarcity, is the scene of dancing, story telling, and enjoyment, and it is very difficult to gather folk lore at any other time of year.

In physical characteristics the Copper Eskimo seem to differ from all other substantially pure blooded Eskimo known to me, in that tendencies to blondness are much stronger than elsewhere. In northern Alaska, for instance, where the Eskimo have been in contact with Europeans for over half a century and where whalers and other white men have freely taken Eskimo wives, there has not grown up any class of European-like beings, but among these more easterly isolated tribes, where European influences might be thought to be wanting, there are found many persons of strikingly European-like appearance. Out of something less than a thousand people seen by us perhaps ten or a dozen had blue eyes. Many of the men eradicate their beards, but of those who do not, a considerable number have fairly full beards of a colour lighter than the distinctly Eskimo black, ranging to a light brown tinged with red; while in western Victoria Land and in Dolphin and Union straits fully half the people have eye-brows lighter than the Mongolian black, ranging to light brown. No person seen has yellow hair of the Scandinavian type, but several have rusty red hair. This redness is more conspicuous on the forehead and becomes less towards the back of the head, just as the beards of the

more European-like individuals are usually dark in the middle of the chin and lighter towards the sides of the face.

The cephalic measurements of 206 individuals were taken. Of these, 104 were adult males. In considering the question of possible admixture of European blood, perhaps the most significant head measurements are those of the breadth of the face and the breadth of the head above the ears. The index obtained by dividing the figures expressing the breadth of the face by those for the breadth of the head shows more than 100 for Eskimo of unmixed blood.

In a summary published by the American Museum of Natural History, Professor Franz Boas gave the following indices for substantially pure blooded Eskimo:—

Herschel island	101
Greenland	105
Baffin bay	102
Alaska	104
East Greenland	102
Smith sound	102

In the same paper he gives the following for persons of mixed Eskimo and European descent:—

Labrador	96
West Greenland	95

My own measurements of 104 men of Victoria Land and the adjacent mainland gives a maximum of 97, which seems, so far as it goes, to differentiate these people in head form as much as they differ in complexion from such Eskimo as those of the Mackenzie river.

PART II.

ARCHÆOLOGY.

(*Harlan I. Smith.*)

The archæological work of the Geological Survey of Canada during 1912 has been a continuation of that of the previous year. Efforts have been made to diffuse archæological knowledge by means of tentative exhibits in the Victoria Memorial Museum. These exhibits have been selected from the national archæological collections. When the new exhibition cases are completed, the exhibits will be transferred to them and improved from time to time as our explorations result in specimens and data for filling existing gaps. One of these exhibits is the beginning of an assemblage intended to show each of the various types of prehistoric handiwork found throughout Canada, the variety and distribution of each. All the other exhibits are in a manner a cross reference to this, each intended to show the culture of a definite region. The regions at present illustrated are the Pacific coast of British Columbia, the Lower Columbia valley, the interior of British Columbia, the Prairie Provinces, Ontario, Quebec, the Maritime Provinces, and the Arctic. Of these, those of British Columbia and Ontario are fairly representative. Here not only educators and students, but all Canadians may make use of the collections, and such use will soon dispel the unfortunate idea that a modern museum is merely a storehouse for curiosities or abnormal objects. Some member of the staff is always ready to meet classes or visitors and to give such help as is possible, while informal talks in the museum may be arranged, especially if request is made a few days in advance. Serious students may have access to the study material in addition to the selections on exhibition.

A popular guide to the collection from the interior of British Columbia has been sent to the editor. When published, this will serve as a pattern for the completion of the similar guide to the collection from the Pacific coast and the one to that from Ontario. When such guides have been completed for all the areas, they should serve, taken together, as a popular manual for the archæology of Canada. Lantern slides have been ordered showing a comprehensive series of the photographs taken of the season's intensive explorations in the Roebuck site in Ontario, and of all the pictures selected for illustration in the popular guides. The stock of slides is thus becoming more and more useful for illustrating the archæology of Canada in any city of the Dominion. As time goes on, lectures illustrated with selected series of these slides may be prepared and loaned for educational purposes. The labels prepared last year have been received and used in the exhibits.

The efforts begun last year to increase the archæological knowledge of Canada by means of original research and systematization have been continued. The field work has been carried on according to a plan for a systematic study of the archæology of the whole of Canada, and the results have met all expectations.

I conducted a reconnaissance near Ottawa in a part of the St. Lawrence lowlands of the eastern woodland area. This particular locality includes part of both the Algonquian and Iroquoian linguistic areas. More particularly this work was along the northern side of the Ottawa river, in the Gatineau valley, in the Nation valley, and on Rideau lake. Mr. W. J. Wintemberg carried on a reconnaissance in the Ottawa valley above the city of Ottawa and nearly the whole length of the

Nation valley. The work of reconnaissance resulted in the locating of a number of cave-dwellings in the Laurentian mountains near the north side of the Ottawa river. Pottery of an Iroquoian type has been found in these caves, which are believed to be worthy of thorough exploration. Specimens were found or seen in the hands of the people of the country every two or three days and village sites were found nearly as frequently. These sites are probably of Algonquian origin. They are all rather small in extent and the deposit is shallow. In general, they are near the streams on suitable camping places for canoe parties. One on Rideau lake at Stone House point or Plum point is the largest.

Intensive exploration under my general direction and the immediate charge of Mr. Wintemberg was carried on in a village site near Roebuck, one of four large Iroquoian village sites situated near Spencerville and the head-waters of the Nation, within 8 miles of Prescott on the St. Lawrence river. In all there are five sites within a radius of about 4 miles, four of them being extensive. Many of the people in this vicinity have small archæological collections. This type of site is usually on the top of a low hill near a spring or small stream, a location entirely different from that of the sites along the Ottawa river and in the lower Nation valley. The sites are indicated by black or dirty spots made up of the rubbish of habitation. Any one of these large sites would furnish material for explorations extending over many months, if not several years, but the results obtained in a shorter time would probably be sufficient to characterize the culture.

The work in the Roebuck site has been the largest intensive and the most thorough systematic archæological exploration carried on in the Province, or, for that matter, in Canada east of the Rocky mountains. Charred corn and beans were found which, together with the fact that this site, like the other four, is not on a very large stream, suggests that the people were agricultural. Arrow points chipped from stone were exceedingly rare and those made of antler were also uncommon. The grooved axe has not been found and even the celt is represented by only a few specimens, but fragments of pottery are very plentiful, as are also sharpened bones, perhaps used as awls. Fifty-one human skeletons have been found, but the burials with one exception were unaccompanied by artifacts. The skeletons show that the people suffered from bone diseases and that there was a considerable infant mortality. They were apparently all of one physical type. Part of the material was put on temporary exhibition, and all of it is to be unpacked, cleaned, catalogued, and studied, so that an illustrated report may be written upon the site and its culture. A popular guide, abstracting the scientific report, may then be written to accompany the exhibition.

Mr. Wintemberg, during nine days in November, at the Provincial Museum, Toronto, secured for the files copies in duplicate of all the archæological locations in Ontario and Quebec recorded by the late Dr. David Boyle on his Archæological Map of Ontario, and so far as known of all Canadian archæological locations in the archives of that museum.

Dr. T. W. Beaman, of Perth, a volunteer worker, undertook general charge of the preliminary exploration of the supposed Algonquian site at Stone House point on Rideau lake. Mr. C. C. Inderwick, also a volunteer worker who spent some time assisting Mr. Wintemberg in order to familiarize himself with methods of excavation, assumed immediate charge of the preliminary exploration at Stone House point.

Mr. G. E. Laidlaw continued his studies of the archæology of Victoria county, Ontario, and presented maps and an extensive manuscript, summarizing our present knowledge of the archæology of that region.

Mr. W. B. Nickerson undertook the initiation of the Government archæological work in the Great Plains along the special lines laid out. The work was confined to reconnaissance in Manitoba near Winnipeg, preparatory to intensive

work. Some specimens, as well as information maps, and photographs were secured. Over seventy items were sent in for the files as his report.

The chief addition to the archæological collections resulted from the intensive exploration in the Roebuck site, from which one hundred and thirty-five boxes were sent in by freight. This collection, together with the specimens resulting from the reconnaissances in Quebec, Ontario, and Manitoba, well illustrates the general advisability of securing archæological collections as a by-product of archæological research rather than by purchase. The results are not selected or culled, but represent as nearly a normal culture as it is possible to obtain. The extra expense of making the collection does not greatly augment the cost of the research. Including the results of the research work, the notes, plans, and photographs, all of which furnish material for publications, scientific and otherwise, and the duplicate specimens which may be sent to other museums throughout the country, the total expense is less than an equally valuable collection when made by any other method. The collections should be as much a result of efforts to increase knowledge as the exhibits are intended to diffuse that same knowledge.

Other accessions, received since December 7, 1911—the date of the last accession listed in the previous report—include those sent in by officers of other divisions of the Geological Survey as follows:—

A grooved hammer made of stone, collected in Alberta by Mr. Levi Sternberg;

Points chipped from stone, and a tomahawk made of iron, collected in Ontario by Mr. M. Y. Williams;

An adze head made of stone, collected near Salmon river in Yukon by Dr. D. D. Cairnes;

Artifacts chipped from stone, collected in the southern interior of British Columbia by Mr. C. W. Drysdale;

Two artifacts from the Gatineau valley, Quebec, collected by Dr. Edward Sapir;

Artifacts from Ontario, collected by Mr. F. H. S. Knowles;

Artifacts from Essex county, Ontario, collected by Mr. C. M. Barbeau; one point chipped from stone from New York, collected by Mr. F. W. Waugh.

Gifts were received as follows: artifacts from near the mouth of Louis creek, in the North Thompson valley, about 35 miles above Kamloops, British Columbia, sent forward by resident engineer Mr. J. C. Embree; artifacts from section 2, division 4, Canadian Northern Pacific railway, sent forward by resident engineer, Mr. R. W. Moore, both gifts made by order of Mackenzie, Mann & Company; two hoes made of bone, collected by Mr. Robert F. Gilder, near Omaha, Nebraska, gift of Mr. Harlan I. Smith; a copper bead, and two casts of artifacts from Ontario, gift of Mr. W. J. Wintemberg; bead made of shell, from Lytton, British Columbia, gift of Rev. H. J. Underhill; three pieces of rhyolite, a gouge made of stone and a celt made of stone, from Maine, and material from a shell heap in Massachusetts, gift of Prof. Frank G. Speck; chipped chert, from Ontario, gift of Mr. John McGaw; pipe made of pottery, from Ontario, gift of Mr. Andrew K. Leeson; an arrow point from Edwardsburg township, Grenville county, Ontario, gift of Mr. Ernest Kingston, Spencerville, Ontario; spear point rubbed out of slate from Edwardsburg township, Grenville county, gift of Mr. Andrew Miller, Spencerville; pipe made of pottery, from Augusta township, Grenville county, gift of Mr. William McKinley, Roebuck; one object from Edwardsburg township, Grenville county, gift of Mr. Alfred Stirton, Spencerville; bead made of soapstone from Roebuck site, Grenville county, gift of Mr. Frederick Smith, Prescott; two beads made of soapstone from Roebuck site, and stone celt from Edwardsburg township, Grenville county, gift of Mr. Frederick Anderson, Roebuck; two fragments of pottery from Manitoba, gift of Mr. E. W. Darbey; two grooved hammers made of stone from near Snowflake, Manitoba, gift of Mr. Robert Neil; pendant made of shell, from near Snowflake, Manitoba, gift of Mr. Eli Sims; eight fragments of

pottery from Manitoba, gift of Dr. J. B. Tyrrell; a fragment of pottery from that part of the Roebuck site on the farm of Mr. Nathaniel White near Roebuck, Ontario, gift of Mr. White; beads and fragments of pottery from Sourisford, Manitoba, gift of Mr. David Elliot.

It is not generally the policy of the archæological section to purchase specimens.

ON ARCHÆOLOGICAL WORK IN ONTARIO AND QUEBEC.

(*W. J. Wintemberg.*)

Beginning May 8, I assisted in a reconnaissance in Quebec on the north side of the Ottawa river above Hull from Eardley to Quyon. Near Chats falls, a small site, apparently of Algonquian origin, was discovered and a number of specimens were found. From Quyon I proceeded alone, stopping at Campbell Bay, Bryson, Fort Coulonge, and Waltham. Inquiries for both information and specimens were made of practically everyone met outside the towns and of the prominent people in them. Some artifacts were obtained by gift at Fort Coulonge and several copper objects were procured on the east range of Allumette island. Information was secured regarding the location of a site on the south shore of the island.

Returning on the Ontario side of the Ottawa river, at Pembroke, inquiry resulted in the location of other sites where specimens have been found. On May 20 we began below Ottawa at Casselman, in the valley of the Nation river. Personal search here resulted in the location of three small sites and the collection of a few specimens. Proceeding alone I traversed the Nation valley nearly to its source, stopping and making inquiries at South Indian, Chrysler, Chesterville, Winchester Springs, Winchester, and Kemptville. Information as to the location of sites and as to finds of specimens was frequently obtained. Two small sites, one probably Algonquian and the other apparently Iroquoian, were discovered on the bank of the Nation river near Chesterville. At the latter site, chipped points made of slate for arrows and spears, celts, pottery, and other specimens were secured. Near Kemptville two Algonquian sites were found and on one of these a large number of fragments of pottery and a few points chipped from stone. Notes in duplicate for the two permanent files were made of all the information secured.

In Spencerville is a small site, and immediately north of the town is a large one; another lies northeast, one is west, and, in the country nearer the St. Lawrence, there is another, making a total of four extensive sites and one small one, all within from 2½ to 4 miles of Spencerville. All these sites were visited. The material found on them appears to be of Iroquoian origin. The Roebuck site, one of these, is immediately east of the village of Roebuck, on lots 2 and 3, concessions VI and VII, Augusta township, Grenville county. The site is large, covering about eight acres of land on the farms of Mr. James Kelso, Mr. Nathaniel White, Mr. Alden Starr, and probably extending on to that of Mr. George Dunbar. Intensive explorations were begun June 17 and carried on until October 28. The excavation was confined to that part of the site lying on the farms of Mr. Kelso and Mr. White, to both of whom we are indebted for permission to work on their land and for many other courtesies. The site is situated on a sandy point, perhaps 20 feet high, between two creeks—one the south Indian creek (an affluent of the Nation river, until recently navigable for canoes), with its swampy margins, and on the northeast a small, swampy branch of this creek. Guest, who visited this place in 1854,[1] describes this point as an artificial mound. On the natural yellowish sand of this site there are about twenty dark spots composed of refuse of habitation, each deepest in the middle. On top of the hill the maximum depth of the spots is about 18 inches, but on the south side of the point, in the spots extending to the bottom, where the slope to the swamp is steepest, the refuse in places reaches a depth of 4 feet.

[1] Cf. Smithsonian Report, 1856, p. 271.

Three assistants were employed during June, four in July, one in August, three in September, and four in October. One hundred and thirty-five boxes of material were shipped to the museum in addition to some small packages sent by mail.

The palisade originally surrounding the village was readily traced for about three-fourths of the way by excavating and finding round blacks pots (the moulds of the post holes) occurring at nearly regular intervals in the yellow sand. Extended excavation would undoubtedly result in completing the tracing. On the south side, where the slope is steepest, there was only a single row of posts, but in several places on the east and north beside the single row there were two and three rows.

Excavations were made in one of the three springs at the site at Mr. Smith's special request. The spring selected was the one into which material might work its way. Hitherto no attempt had been made in Canada to examine springs, and while only a few specimens were found, the securing of articles made of wood, which in any other place except under water would probably long since have decayed, adds to our knowledge of this branch of primitive technology.

No objects made of copper or other metal were discovered. Some unusual forms of bone objects were collected. There are also many specimens made of antler, one carved in the shape of a phallus. Objects made of shell were very rare. A few unios were found with a perforation through the side. Others were rubbed down on the sides, while still others showed evidence of having been used as scrapers. One of the specimens was evidently a paint dish, as some red paint still adheres to it. Three objects made of marine shell (a large conch), and a fragment of a quahog shell were found.

The large number of animal bones found shows that the people subsisted in part on animal food. Although about thirty points for arrows made from antler were found, there were only a few chipped from stone. This suggests that other objects, possibly sharp bones, of which many were found, were used. Traps, too, may have been largely employed. It also seems to indicate an absence of frequent wars near the village. Cores, chips, and pieces of chert, jasper, or kindred stone suitable for chipping, were represented by only two or three specimens. Several harpoon heads—some bilateral, others unilateral—and specimens of fish hooks made of bone in all stages of manufacture, from the rough bone to the finished hook, were found. The presence of charred corn, corn cobs, sunflower seeds, squash seeds, and beans shows that the inhabitants of this site were an agricultural people.

Rubbing stones and small mortars were common. Fragments of pottery bearing a great variety of patterns were very numerous. They are of Iroquoian type. Some have handles. A few very small vessels were found entire. Celts made of stone were occasionally found, while hammer stones were numerous. Awls made of bone outnumbered all other specimens made of this material. Hundreds of them were found. Two specimens of textile work were secured, a carbonized piece of rope, apparently made of corn husks, and what appears to be a piece of coarse matting.

Pipes made of pottery were plentiful, all of which were broken. Some are very unusual forms, including 'portrait' types. Broken stems of two pipes made of stone were also found. There were a large number of discs chipped from fragments of pottery, some of them with the edges rubbed smooth, that were possibly used in games, and some perforated discs made of soapstone.

Fifty-one human skeletons, usually in the yellow sand below the refuse, were found. The depth of burial varied. Some were within an enclosure, as was indicated by moulds of post holes surrounding them in the yellow sand. There were three double burials. The remains were buried in various directions as to orientation, although about fifty per cent of them were lying with their heads to the east or west. They were usually on the side with the legs always flexed and the arms

nearly always so. Part of these were skeletons of children. Most of the bones were in a good state of preservation. One small pottery vessel of graceful form was found with one of the skeletons. The others were unaccompanied by artifacts. Numerous stray human bones were found in the refuse, and some of these had been partly burned. All the bones were collected for the museum.

As nothing of European manufacture or even showing European influence was encountered, we must conclude that the site was abandoned before, or shortly after, the advent of Europeans into the St. Lawrence valley.

ON AN ARCHÆOLOGICAL RECONNAISSANCE OF MANITOBA.

(*W. B. Nickerson.*)

The five weeks at my disposal in 1912 limited the contemplated archæological reconnaissance of the prairie provinces of Canada to Manitoba, and the work done is only a beginning in that Province. In Winnipeg, such historical data and information as are obtainable only through personal interviews were collected. Visits were made to the mound sites on Red river at St. Andrews rapids. Southern Manitoba west of the Red River valley, adjacent to the Deloraine and Estevan lines of the Canadian Pacific, was covered. At all points visited an intelligent interest in our plans and purposes was found and encouraged. Correspondence relative to archæological fields, and material objects for the national collections, were solicited, and in some instances secured. An endeavour was made to establish a permanent co-operation through correspondence.

The earthworks in the Souris valley, in township 2 north, 27 west, in the southwest corner of the Province, comprise thirty or more mounds, five or more village sites, and a rectangular walled enclosure. Of the mounds, eight are low and long, locally termed 'grades'; the remainder are circular mounds 2 to 5 feet high. Mr. David Elliot, living in the vicinity, has collected from his fields and from the mounds much interesting material, and presented a representative series of grooved stone mauls and hammers, some potsherds, a few beads, and other objects. Errors in topography as sketched in Jephson's survey of 1880, in section 33, were found, and corrected on the manuscript archæological sketch map of the series. An accurate and comprehensive survey should be made next season.

The knolls about Killarney were examined and a sketch map was made of the district adjacent to the southeast end of Lake Killarney, where a campsite and what is possibly a mound were found. Pilot mound, in township 3 north, 11 west, a lone hill of cretaceous shale, was examined. A burial mound now opened crowned the summit of this hill. In the west across the deep valley of the Pembina, lies the mound plain above Rock lake. On this plain above the east end of the lake, in township 3 north, 13 west, are eight mounds, four in one group, the others scattered at wide intervals over the plain. In the southeast is Star Mound hill, west of the village of Snowflake, in township 1 north, 10 west. It is, like Pilot mound, an isolated hill, said to have been named Dry Dans hill in early times. It covers a larger area than Pilot mound, and a spring issues from its southern side about halfway down the slope. The summit of the hill is crowned by a circular mound 5 feet high, having on the north a gradually tapering extension. East and southeast of this hill, in township 1 north, 9 west, on the plain above the Pembina valley, are eight or more mounds. There is one east near Mowbray, in township 1 north, 8 west. Two more mounds are found in this township, on the plain north of the river, and mounds are said to be found on both sides of this valley beyond the line of North Dakota.

'Calf mountain', 1½ miles southwest of Darlingford, was visited. It is circular, 15 feet high, among similar morainic knolls, and is probably natural. Just east of Manitou, on the summit of the highest elevation between Manitou and Darlingford, is a mound 2 feet high. On the summit of the Pembina mountain, just southwest of Morden, is one 3 feet high. The trail known in early historic times as the Missouri trail, from Winnipeg, passed near the Morden mound, thence via 'Calf mountain,' and crossing the Pembina river near the Snowflake mounds, passed westward south of Star Mound hill.

Permission was secured for opening mounds at Sourisford, Rock Lake, Snowflake, and Morden, and the work should be commenced without unnecessary delay.

PART III.

PHYSICAL ANTHROPOLOGY.

(*E. Sapir.*)

An important aspect of the anthropological research of the division was inaugurated this year by the study of the physical anthropology of the Iroquois Indians. Mr. F. H. S. Knowles, of Oxford University, undertook charge of this work, spending a period of about four months in field research at Six Nations reserve, Ontario, and upwards of a month in museum work connected with physical anthropology in Ottawa. Mr. Knowles' work centred chiefly on procuring a series of detailed head and body measurements of Iroquois men, women, and children living on the reserve. Two hundred and eighty-eight anthropometric schedules of as many individuals were obtained, forming the basis of a study of the physical characteristics of the Iroquois Indians. It is intended to add considerably to this material in future research, so that the anthropometric study of the Iroquois may be made thoroughly adequate. In connexion with his field research Mr. Knowles also secured forty-five specimens of hair from as many Iroquois individuals. It is to be deeply regretted that Mr. Knowles' illness during much of the time that he spent in the field somewhat reduced his actual field period of research, and that continued illness has made it impossible for him to finish the more detailed summary report of his work which he had begun. It is hoped that this report may be included in the summary report of the division for 1913.

Incidentally to his work among the living Indians, Mr. Knowles dug up an ossuary close to the reservation. Besides a certain amount of archæological material, Mr. Knowles procured a considerable body of interesting skeletal material consisting of twenty-nine skulls, twenty-eight long bones, and thirty-one miscellaneous bones, including a large number of teeth. This skeletal material, together with the fifty-one skeletons which Mr. W. J. Wintemberg has obtained from the Roebuck site near Spencerville (see his report in Part II), forms a valuable foundation for the study of the physical anthropology of the Iroquoian tribes of Canada, as there seems little doubt that the remains found both at the Roebuck site and the ossuary near Tuscarora, Ontario, belong to Iroquoian peoples. The eventual comparison of the results obtained from a study of such remains with those obtained from anthropometric research among the present day Iroquois, who have been subjected to very considerable white influence, will no doubt prove suggestive.

Accessions in Physical Anthropology.—The accessions for the year in physical anthropology have been due to either gifts and material secured by Survey field men not connected with the division, or as the result of archæological field work undertaken by the division. The gifts embrace:—

From B. O. Strong, constable of the R.N.W.M.P., bones of a child, from near Windthorst, Sask.

From Andrew Berg, of Kanai, Alaska, human cranium.

From A. W. Phillips, Resident Engineer, skull, from near Kamloops lake, B. C.

From J. C. Embree, resident engineer, human bones, from near mouth of Louis creek, North Thompson valley, about 35 miles above Kamloops, B. C.

From W. H. Melanson, resident engineer, human skeleton, from near Kamloops lake, B. C., and skull and bones from Canadian Northern Pacific railway, Station 1046.

From R. W. Moore, resident engineer, human bones, from section 2, division 4, C. N. P. R.

From E. Webb, resident engineer, skull, lower jaw, and other human bones, from near Ashcroft, B.C.

The last five accessions are due to the kindness of Mackenzie, Mann & Company, who have given orders to their engineers at work on the construction of the Canadian Northern railway to forward all skeletal material that they come across in the progress of their work to the Victoria Memorial Museum.

There have been obtained by a Survey man not connected with the Division of Anthropology the following:—

By C. M. Sternberg, 3 fragments of human skull from region of Red Deer river.

Material in physical anthropology obtained by field men working for the Division of Anthropology consists of:—

By J. A. Teit, Spence Bridge, B.C., part of eight human skeletons and one skull, from near Spence Bridge, B.C.

From W. J. Wintemberg, fifty-one skeletons, from Roebuck site (see Wintemberg's report in Part II).

From F. H. S. Knowles, skeletal material from near Tuscarora, Ont., as above.

From F. H. S. Knowles, forty-five specimens of hair of living Iroquois, from Six Nations Reserve, Ont.