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Anthropometry of the Cree and Saulteaux Indians in Northeastern Manitoba

BY

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ANTHROPOMETRY OF THE CREE AND SAULTEAUX INDIANS IN NORTHEASTERN MANITOBA

INTRODUCTION

This is the report of a study, made in the summer of 1927, of the physical characteristics of the Indians in the neighbourhood of Island lake, Gods lake, and Oxford House, all in Manitoba northeast of lake Winnipeg (*See* Figure 1). The investigation was made for the Division of Anthropology with the primary object of obtaining a record of the physical proportions these bands of Indians possess at the present time.

It is for several reasons to be regretted that but little active interest has, in the past, been taken in the anthropometry of the Indians of the north. If, indeed, we would compare the proportions of this series of Indians with those of the nearest bands on which extensive observations have been made, we must turn to the excellent paper on "Anthropometry of the Siouan Tribes" by the late Louis R. Sullivan.[1]

Language and Tribe. For convenience the Department of Indian Affairs places the Indians of these three regions, together with several adjacent bands, collectively under the administration of the Norway House agency. The report for 1915 of this agency reads thus: "The Indians of this agency are members of the Swampy Cree tribe mainly, there is a small proportion of the Ojibway. The language spoken is principally Swampy Cree, a number of the people understand and speak English quite well." Ojibway is here synonymous with Saulteaux. Father Du Beau of the Roman Catholic mission at Island lake, a very good linguist, tells me that the language spoken around the part of Island lake at which he is stationed is a mixture of Saulteaux and Cree; some words being Saulteaux, others being Cree; compound words being in many cases hybrids of the two. The interpreter who accompanied me throughout the expedition was a quarter-breed, who, though he spoke both Cree and English with equal ease, had distinct difficulty in understanding one detached group of Indians in the Island Lake region (those at Smooth Rock) because, as he said, they talked the pure Saulteaux dialect. These are the Indians the Department especially regards as being Ojibway or Saulteaux.

Mr. Fred Disbrow of Island lake, whom I take to be very well informed on matters pertaining to these Island Lake Indians, since he is acquainted with everyone on the reserve, knows many of their family histories and many of their camp-fire tales, in addition to the dialects, told me that all the people of Island lake regard themselves as being of Saulteaux stock. He told me that there are in the whole neighbourhood of Island lake not more than three Crees, and, that though words of Cree origin are spoken, these have been acquired partly from the missionaries, partly from the Bible, which is written in Cree, and partly through contact with Norway House. My interpreter told me that at Gods lake some of

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[1] Anthropological Papers of the Am. Mus. of Nat. Hist., vol. XXIII, pt. III, New York (1920).

the people spoke the same mixed dialect of Cree and Saulteaux as was spoken throughout the greater part of Island lake, whereas others spoke pure Cree. Those who spoke the mixed dialect had migrated to Gods lake from farther east. It is indicated in appendices II and V which these are; and in table V, page 28, the two groups are treated separately.

At Oxford House Cree only was spoken. Some, therefore, of the Indians examined during this investigation spoke pure Saulteaux, some spoke pure Cree, and others spoke a mixture of the two.
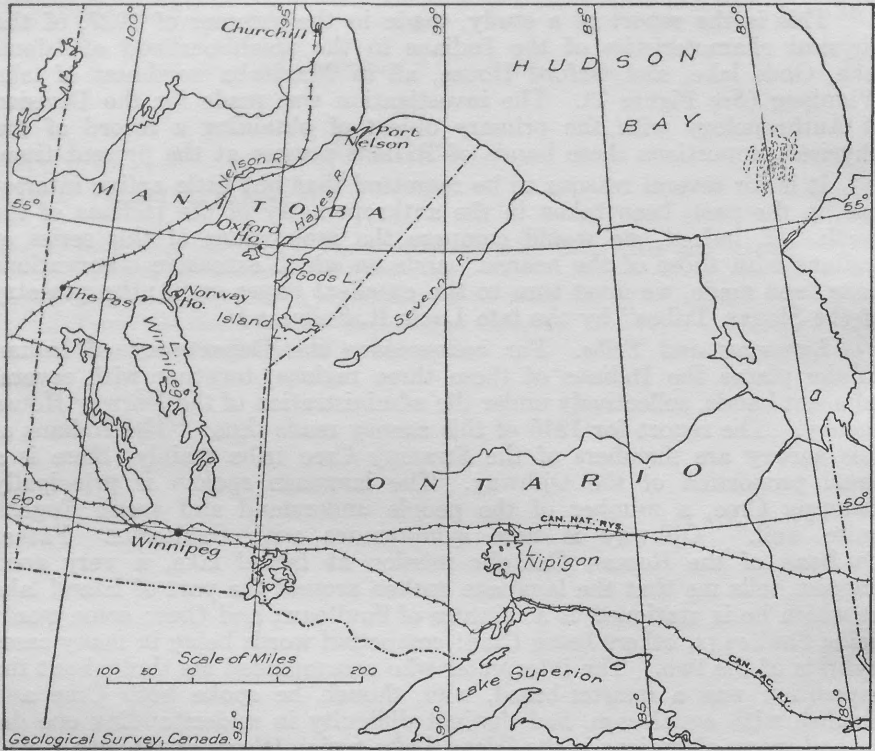
FIGURE 1. Index map showing positions of Island lake, Gods lake, and Oxford House, northeastern Manitoba.

Marriage. Though for the most part it is the custom of these Indians to marry their cousins, they nevertheless adhere to the tradition (though they are apt to deny it) of not marrying into their own totem. Since a girl on marrying assumes her husband's totem, any children she has may and do marry her brother's children, for in so doing a marriage between different totems is effected; but the children of brothers do not marry each other, neither do the children of sisters marry each other, but brother's children marry sister's children and the parents arrange the marriages.[1]

[1]Though the marriage of cousin with cousin is traditional, the tradition is not invariably followed today, for a number of men and women had brought wives or husbands, as the case might be, from other bands. One extremely old man I met in these regions some years ago had two wives.

From this it might be deduced that there is much in-breeding (or line breeding), with the consequence that the stocks are of great purity; but, if it be true, as was implied, that an Indian's conception of marriage obligations resembles rather that of the Eskimo than that of more civilized people, then one can by no means always rely upon the "legitimacy" of the children. One well-informed half-breed, who knew the country and the people well, described Gods lake as a place where morals were very lax and where there were very few full-blood Indians. It is commonly agreed that at Oxford House there is a large admixture of white blood. At Island lake it is said that two persons between the ages of 30 and 40 are known to possess some white blood, and that two others of similar ages are rumoured to possess some, but my informant was unwilling to disclose the identity of these.

The majority of the girls marry at about the age of 18 years; almost everyone of them is married before reaching the age of 20 years. There are not more than three or four unmarried men of over 21 years in the three localities.

In connexion with the question of the purity of the stock in the various localities the following brief historical note may be of interest and not without significance.

Historical Note. In the year 1672 the Hudson's Bay Company established a fort on Hayes river within a few miles of Hudson bay and called it York Factory. Its purpose was to trade with the Indians in exchange for furs and pelts, which were shipped to England. In 1798, a branch from York Factory was built farther up Hayes river and called Oxford House; and, at about the same time, a third post was built still farther inland, where Nelson river flows out of the northern end of lake Winnipeg, which came to be known as Norway House. In the earlier days the personnel of these posts was composed of unmarried men who had been brought out from England, and who were practically the first European settlers in this north land; later, it was drawn more especially from the north of Scotland. At least one contingent came from Norway, hence the name Norway House. It is now more than a century since a post at Island lake was first established; but this post was twice abandoned during lean years when fur was scarce and the Indians had scattered afield. The post on the Gods Lake site is much more recent. Those who manned these various stations had, in addition to defending them from attack, to act as crews for the "York boats" which distributed supplies and ammunition from York Factory to the inland posts and which returned with furs.

The Indians in the northern parts of Canada have for long tended to collect and to congregate in the neighbourhood of the posts with which they trade, and now for many years they have been entrusted with the freighting which previously the white man did. Of the three posts (Island Lake, Gods Lake, and Oxford House) the one at Island lake is rather inaccessible and until within the last fifteen years has been, as we shall see, somewhat secluded; whereas those at Oxford House and at Gods lake are of more easy approach, and have, since they were founded, been in direct communication with York Factory and Norway House.

In fact, the main route of entry from England into western Canada used to pass through Hudson bay, York Factory, Oxford House, and Nor-

way House; and this was the route which the Red River settlers, on their way from Scotland, to the regions now called Selkirk and Winnipeg, followed in the years 1812, 1813, and 1815. From Norway House to Island lake the journey is to be made entirely by canoe and takes from six to nine days. This journey, on account of its long, numerous, and very difficult portages, no doubt merits the claim put forward for it of being perhaps the most difficult regular route that is undertaken in the north at the present time. It is especially to be noted that the route which at present is used between Island lake and Norway House has been known only for about fifteen years. Prior to that time it was the custom to replenish the stock at Island lake by a more devious route; by one that passed through Gods lake and across a deep swamp, about 3 miles in length, and over a height of land. This swamp is euphemistically known as "Mossy portage." As apparently it was found to be impracticable or else inexpedient to portage heavy York freighting boats across this bog, Mossy portage became a relay point, i.e., freight was brought as far as this portage by crews from York Factory or from Oxford House, where they were met by crews from Island lake, who took charge of the freight, transferred it to their own canoes, and conveyed it to the company's post at Island lake.

From this account it would appear that Mossy portage served as a barrier to separate the Indians at Island lake from the world to the north and west of them. I am, moreover, informed that even to this day the people of Island lake hold themselves aloof from their countrymen of other bands; even when they meet them on the trail they neither camp with them nor do they eat together.

On the eastern side, however, it may be that indirect contact has, in the past, been made with white people at a post (founded in 1685) at the mouth of Severn river, which like the Hayes, flows into Hudson bay. It is, in fact, said, or rather, I am definitely informed, that at Trout lake— a region about 120 miles to the east of the Indian encampment at Island lake—there are a number of children who unmistakably are of white blood; and that some of the men have beards and are called "Beardy" or "Pardy" which is the Indian attempt at pronouncing this word. There are today at Island lake forty or more Indians who have within recent years migrated from this Trout Lake region.

Such is the story one hears locally today; another account was apparently current fifty years ago.[1] It runs as follows:

"Those Island Lake Indians were never stunted by portaging. They live in their canoes and make hardly any portages. No portages were necessary where they live. I visited that tribe just fifty-one years ago this summer and heard the story of their origin, which also explains their short stature. It appears that long ago (150 years) a hunting party of Swampy Crees went down the Severn, and when near the mouth of that river, ran across a party of Eskimos. The two parties started fighting. The Crees drove the Eskimos on to an island at the mouth of Severn river, slaughtered all the males, and took the women and girls back to Island lake. The stunted tribe of Island lake are the offspring of these Swampy Crees and the Eskimo women. This is shown by the fact that two-thirds of the men are bearded.

[1] "Mr. H. R. Halpin, western old-timer, and former Hudson's Bay employee." Manitoba Free Press, June, 1927.

The Cree name for their habitat up there is Lake Wah-wee-ah-ka-mik. These Indians dress in skins—sealskin, wolfskin, bearskin—and they trade at the Hudson's Bay post at Round lake for things such as needles, traps, axes, tea, sugar, knives, and tobacco."

This account is of much significance, for no one knowing Mr. Halpin, the writer, could very well disregard his statement. He, moreover, supplements this account in telling me that in his day "York boats," manned by crews of eight, made the complete journey from Island lake to York Factory and back; and that Mossy portage was in no sense an impassable barrier then.

Today, as this report shows, the men at Island lake are not bearded; and they certainly do carry almost unimaginably heavy loads on their backs. These accounts are probably not in complete discord; they deal with periods that are separated by half a century in time. Out of all this emerge three fairly substantial probabilities:

(1) The Indians at Oxford House are Crees who have had great opportunities of becoming amalgamated with the white population.

(2) The Island Lake people are Saulteaux with an admixture of Cree to whom such opportunities of amalgamating with the Europeans have not to any great extent been granted.

(3) Approximately one-half of the Gods Lake population is directly or indirectly of York Factory extraction, and the other half comes largely from farther east.

Regard must also be paid to the tradition that was in vogue fifty years ago, concerning the Eskimos and Crees, though it is not current today.

Acknowledgments. Dr. C. H. Goulden, Senior Cereal Specialist, Dominion Rust Laboratory, Winnipeg, was invaluable to me, for without his guidance in statistical methods it would not have been possible for me to have compiled this report.

To my secretary, Miss Wilma F. Service, who has spent many hours arranging and checking figures, in making calculations, and in assisting me generally in the work; to the School of Comptometry, Winnipeg, for the loan of a comptometer, and to Mrs. B. Pearson who operated the machine, I am much indebted.

For information, assistance, and many kindnesses, I wish to thank Father Du Beau, Messrs. Fred Disbrow and Chapin (of Island lake) ; Karl Bayly and Lake (of Gods lake); J. N. C. Kell (Oxford House); Gordon (Norway House); S. J. C. Cumming of the Hudson's Bay Company, Winnipeg, and Robert Watson, editor of the Beaver.

METHODS

The material was collected without selection and totally at random; every one who presented himself for examination was measured, and no one who was approached refused to be measured, except the women at Oxford House. Some investigations (as yet, I believe, unpublished)[1] had

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[1] Miss Beatrice Blackwood, I am informed, visited this neighbourhood in 1926.

been made on these women a year or two before; and as they saw no purpose in submitting again to a procedure that had lost its novelty, my efforts to persuade them to be measured were without avail.

When it is said that material is (or samples are) taken or collected at random, the statement may be strictly true in so far as the collecting is concerned and yet be inaccurate from the standpoint of the material (or samples). In so far as its paper is concerned the collector did not discriminate. Was the material in any way at fault? This may best be answered by referring to the correlation table, page 17, where it may be seen that four Oxford House men (Nos. 17, 18, 19, 20), with grey eyes, came all at once to the Mission House to report for measurement. Was it by chance or by design that four grey-eyed men, living in a brown-eyed community, reported together? It is to be noted that two of these (18 and 20), have biparietal-bizygomatic indices of 89·5 and 92·0, which are respectively almost typically white and half-breed indices; and that the other two have indices of 99·0 and 101·5, which are characteristically Indian (if not Eskimoid) indices; yet, one of the former (18), and one of the latter (17), have heavy moustaches and the one with the index of 101·5 had a brother (14), who not only had grey eyes, but also an index of 94·8 and was partly bald. All of this is more than suggestive that all four were of white admixture and that they had arranged to report together.

Further, it is usual for Indians in these parts to live in family groups around one paternal hearth; three or four tents or tepees being disposed in radial manner around a central fireplace. It is only reasonable to suppose that such an assembly would agree amongst themselves upon certain lines of action—to be measured, to go hunting, or freighting, and the like.

Again, when we were one or two days' journey from Island lake we passed several canoes of Indians, who impressed me as being of distinctly shorter stature than those we were subsequently able to measure. Owing to such circumstances it may come to pass that certain material may, as it were, unconsciously conspire to frustrate the best efforts of the collector to sample at random; on the one hand, by presenting itself *en masse;* on the other, by withdrawing *en masse.* This factor should be borne in mind. Nevertheless, since during our stay in each of the localities we examined every adult male who was at home, it may be presumed that our data are comprehensive enough to allow of this factor being almost discounted.

It was deemed expedient not to delay unduly those whom we intercepted on portages lest they become too impatient to proceed on their way. In such circumstances as these we refrained from recording the stature, the arm stretch, and the sitting height, because the taking of these three measurements consumes so much time: a level platform, a low box, frequently a third reading and many injunctions are prerequisite to the taking of these measurements.

That an examination of the teeth, the eyes, and certain measurements are omitted in some cases must be attributed not to any design on my part but to inadvertency. A number of persons, even young adults, were so round-shouldered that it would have been useless to have taken their stature or sitting height. Some others we failed signally to persuade to stand or sit erect enough to allow of our taking an accurate reading. A few were lame; a few had crippled arms.

Hermann's Anthropometric instruments were used in accordance with the directions of the Geneva Convention as set forth in Hrdlicka's "Anthropometry," except in the case of the arm stretch; in taking this measurement the rod was held in front of the chest, and not behind it, with the result that, as experiment shows, from 1 cm. to 1·8 cm., were added to the arm stretch. Approximately 1·4 cm. should be deducted from the measurements in order to make them comparable with those taken conventionally.

The measurements, as they were taken, were entered by the author on prepared blank forms; they were then retaken, and so were checked. In the cases of the arm stretch, and of the soft parts (i.e., nose, lip, mouth, ear, and hand), only one reading was taken, but if it were in any way extreme then a second observation was made. Many were taken a third time.

MATERIAL

In all, observations were made on four hundred and thirty-four Indians, who were distributed as follows:

ADULT MALES

Island Lake Ages 20–59 years.................................. 68
"   60 years and over........................... 14

Total number examined............................. 82
i.e., 62·5 % of the total adult male population of 131.

Gods Lake Ages 20–59 years.................................. 17
"   60 years and over........................... 7

Total number examined............................. 24
i.e., 42% of the total adult male population of 57.

Oxford House Ages 20–59 years.................................. 55
"   60 years and over........................... 4

Total number examined............................. 59
i.e., 88% of the total adult male population of 67.

ADULT FEMALES

Island Lake Ages 20–59 years.................................. 100
"   60 and years over........................... 16

Total number examined............................. 116
i.e., 72·5% of the total adult female population of 160.

Gods Lake Ages 20–59 years.................................. 27
"   60 years and over........................... 9

Total number examined............................. 36
i.e., 49 % of the total adult female population of 74.

Therefore, out of a possible total of 255 adult males, 165, or 65 per cent, were examined, and out of a possible total of 234 adult females, 152 or 65 per cent, were examined.[1]

Of boys between the ages of 10 and 19 years, 58 were examined.
Of girls between the ages of 10 and 19 years, 52 were examined.

[1] The total adult female population at Oxford House is 89.

Ages. The missionaries had records of the dates of birth of most of the children of 20 years and under; and to these records they very kindly gave me full access. The ages of the children at Oxford House are accurately given, but we can vouch for the accuracy of only about 60 or 70 per cent of those at Island lake, as we were unable in a number of cases to obtain the parents' names and these were necessary for the identification of the children. The ages of the adults and of the old people are only approximate; the age each volunteered to give—provided it seemed a reasonable one—was accepted.

Grouping. We considered separating the individuals of the three bands into those we deemed to be pure Indian and into those of diluted blood, but it soon became apparent that such an attempt at sifting would meet with serious difficulties, for had, say, the colour of the eye (iris) been relied upon as a distinguishing trait, and everyone with light brown and with grey eyes been regarded as breeds, we would clearly—since grey is here recessive to brown—have placed in one category a grey-eyed individual and in another his many medium and dark-brown-eyed brothers and sisters, and perhaps even his parents. The results of such an attempt are shown in a correlation table on page 17.

We have in table V, page 28, grouped these people separately according to the dialect they spoke and have recorded the chief average proportions and indices of each group. But, on the whole, it seemed wiser not to restore the various migrants we were able to trace, to the localities either they or their parents had come from, but to deal with each individual as though he were a native of the region in which we found him. And, although this method of regional grouping has been adopted, it is to be understood that in each locality there are, as one would naturally suspect, a number of individuals who have migrated from each of the other localities and who have married into the local bands.

ABBREVIATIONS

I.L.   refers to Island lake.
G.L.   "   Gods lake.
O.H.   "   Oxford House.

The numbers in brackets in the text are the serial numbers of individuals referred to, and if the appropriate appendix on page 58 et seq. be consulted, full details of these individuals will be found.

In the Frequency Distribution Tables:

Mean refers to average.
σ "   standard deviation.
E_m "   probable error of the mean.
V   "   coefficient of variation.
N   "   Number of cases examined.
P.E. diff. refers to probable error of the difference.
Diff.   "   the numerical difference between two measurements.

DESCRIPTIVE CHARACTERS

The medium to dark brown colour of the skin of the face was in general not noticeably different from that of other bands of Indian inhabitants of Manitoba. Those at Island lake were darker than those at Gods lake, and at Oxford House several of the men were relatively so light in complexion that they must certainly have been part-breeds. No colour scale was employed.

The hair was black, straight, and of medium coarseness; in some females it was almost fine; in only relatively few could it be described as very coarse. In one man (O.H. 36), obviously a breed, it was brownish. In seven males the hair immediately over the region of the forehead was wavy or curly; of these, five were at Island lake (I.L. 46, 57, 66, 71, 74), one at Gods lake (G.L. 17), and one at Oxford House (O.H. 25). One of these is stated to be of white blood (G.L. 17) and one had a beard and moustache, which throws doubt upon his racial purity (I.L. 46). There is nothing to indicate mixed blood in the other five. Five of the seven were over 60 years of age.

Many of the younger men shave at times, not probably so much because they have occasion to—for the hairs on their lips and chins are few—as from a desire to imitate the white man. A number of men had sparse moustaches and some had also sparse beards; some had even moderately strong growths of beard and moustache. Only three men are recorded as having hair on the cheeks; all three were at Oxford House (O.H. 36, 59, 3). Only four persons were at all bald: one a very old woman (I.L. 85), one a young man of 28 years (O.H. 14), and two were old men (O.H. 3, 44). In each of these the bald patch was on the crown of the head. As is indicated by table I, page 17, it is more than likely that all four were of mixed blood, because of these three men two had grey eyes and the third had a growth of hair on his cheeks (by omission no record was made of the colour of this man's eyes). Moreover, the biparietal-bizygomatic indices of the three men are below the mean for Oxford House, which is 95·9, and in the case of the old woman this index is 89·5, which in itself almost proclaims her to be not purely Indian. This view is substantiated in her case by the observations that her biparietal-bizygomatic index is lower than those of all the other fifteen Island Lake old women, but one; her mouth the smallest, but one; and of one hundred and twelve Island Lake women and old women, whose eyes were examined, she was one of the five having medium brown eyes.

No one of under forty years of age was observed to have a white hair on the head; between the ages of forty and fifty several presented a few white hairs; it was unusual for any, of either sex, to pass the age of sixty without displaying numerous white hairs. After this age even the scanty beards and moustaches of the men had some white hairs.

Noses were of all shapes, but the clean-cut, prominently aquiline type, so usually depicted, was in a very small minority; relatively few had high bridges. Though many were convex, the convexity was of mild degree. The point or tip of many noses was somewhat enlarged, with the result that a slight concavity of the bridge preceded the enlargement, and this is responsible for many of the concavities indicated in the chart. In one Island Lake woman the nose was definitely retroussé.
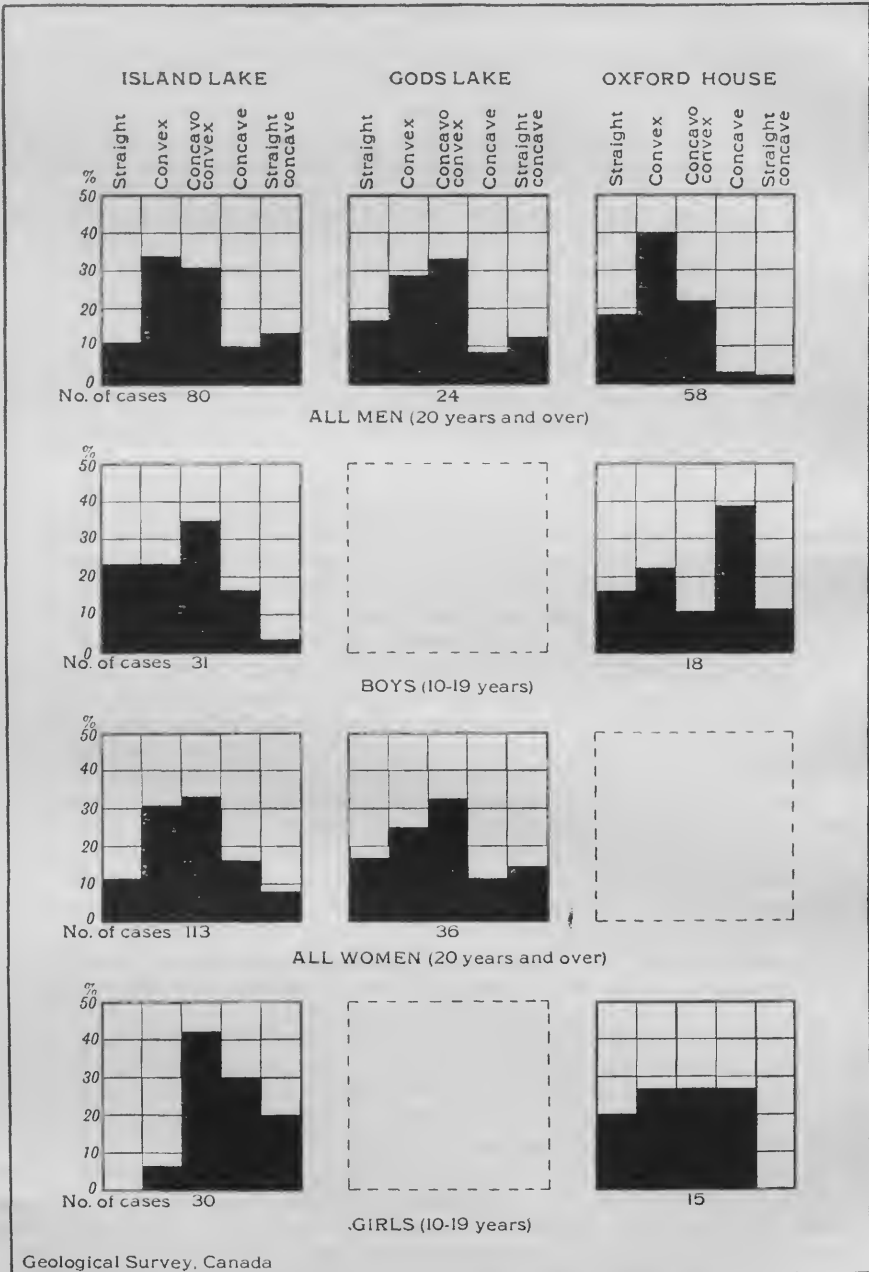
FIGURE 2. Percentage distribution of the shape of the nose.

The lateral palpebral canthus was in most cases slightly, and in a few cases very markedly, above the level of the medial canthus. (It appeared to be lower than the medial canthus only in some of the old people.) An epicanthic fold was rarely seen.

The details of the colour of the eyes are set out in graphic form on page 12. They were not matched for colour against any standard, and in consequence the chart can only express a personal estimate of the colour distribution. An endeavour was made to separate the eyes into six classes: black, dark brown, dark to medium brown, medium brown, light brown, and grey or bluish grey. It is quite apparent, despite the fact that no standard was employed:

(a) That at all ages the darker colours prevailed at Island lake, where light brown and grey eyes were almost totally lacking.

(b) That the women had darker eyes than the men.

(c) That the eyes of the Oxford House men tended in general to be lighter than even those at Gods lake.

It will be noted that out of a total of seventeen individuals of all ages with grey eyes, fourteen were at Oxford House. And further, it would appear that most grey eyes had passed with increasing age through a procession of colour changes; black at birth, they pass through the different shades of brown to light brown; later the periphery of the light brown eyes changes to grey; from this grey periphery, grey streaks in time spread to the pupillary margin, so that grey rays alternate or interdigitate with brown ones: still later the peripheral ends of the brown rays fade to grey; so that eventually the eye, from being originally black at birth becomes a grey one in which brown flecks are dotted in radial manner around the margin of the pupil, but this end result, at least in the old people, is achieved after the eye has passed through a series of "trans-colorations".

This surmise, for it is a surmise, is based on the following observations:

(1) In all three localities the eyes of the children in arms were definitely black, as I had ample opportunity of observing at the missions, where numerous mothers with their babies attended.

(2) A number of adults had light brown eyes, though no one of under twenty years had.

(3) Three of the thirteen persons with light brown eyes, at Oxford House, are noted as having a deep outer halo of grey.

(4) The two cases of grey eyes among the old men at Gods lake, and the eight cases among the men and old men at Oxford House are all noted as having either brown rays or brown flecks radiating from the pupillary margin into a grey background. (Sketches of these eyes made at the time confirm this remark.)

Grey eyes also occurred in six Oxford House children, two being boys and four being girls. In two of them it is noted that brown rays were present. It is presumed that these six Oxford House children were of white admixture.
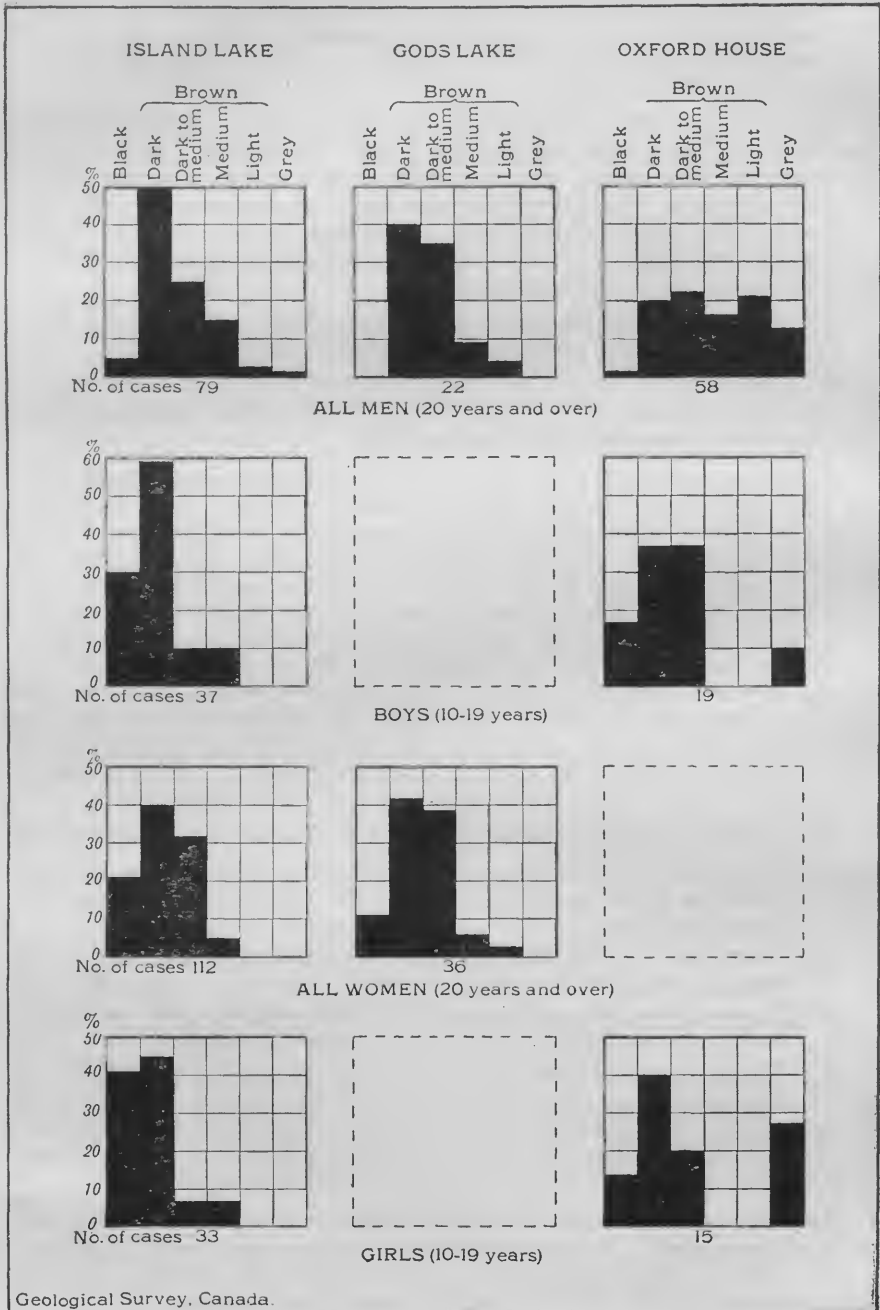
FIGURE 3. Percentage distribution of the colour of the eye.

Arcus senilis occurred in all neighbourhoods, and frequently at an early age; the five youngest persons to present this condition being of ages 21, 30, 34, 35, and 35 years. It was more common at Island lake, where twelve males and four females were affected, than at Gods lake or Oxford House, where there were three and one respectively. Distinct from arcus senilis was a condition I had not seen before; namely, one in which the parts of the cornea that would normally be overlapped by the lids, even when the eyes are open, were hazy and grey. This was not uncommon even among children in their teens.

Pterygium, with or without pannus, both of which are relatively common among the Indians of Manitoba, likewise occurred in all neigh-bourhoods, and was noticed in seven Island Lake, two Gods Lake, and five Oxford House, Indians. Pigmented conjunctivæ of a yellowish or muddy-yellow colour were more in evidence at Island lake than elsewhere.

It was the rule, and not the exception, to find teeth so closely crowded together that they overlapped each other. The lower incisors were most frequently involved, the upper incisors less frequently, and in a few cases the canine and even the first pre-molars were out of alinement. This early arrested my attention, for one was naturally surprised to find such a condition amongst a people who lead a primitive type of life; in whom one expects the teeth to be sound and well-spaced. The records of this are not complete, but it is definitely noted that overlapping occurred in 50 of 82 Island Lake adult males; 13 of 24 of Gods Lake, and 33 of 59 of Oxford House; in 72 of 116 adult females of Island lake and 28 of 36 of Gods lake. It was, moreover, quite common amongst those under twenty years of age. Certainly, then, well over 60 per cent of all adults had crowded and overlapping front teeth, and the overlapping was generally of no mild degree. One man (I.L. 105) had an impacted third lower molar and one man (I.L. 104) had a double (median or lateral?) upper incisor, one being placed behind the other. Shovel-shaped teeth were seen, but were not systematically examined for.

The palate was commonly highly arched. In many, the rugæ on the pre-maxillary portion of the palate were of very unusual prominence. The posterior half of one man's palate was cleft (O.H. 28).

The tongue tended to be large and to bear on its sides the impressions of the teeth.

The digital formula[1] was, in all but three cases, of the primitive type, i.e., the middle finger is the longest, or most projecting, then in succeeding order of length or projection come the ring, the index, the little finger, and the thumb. The formula would thus read $3>4>2>5>1$. In two Island Lake men (I.L. 33 and 39), the index and the ring fingers were of equal length (on the left side), thus giving a formula $3>2=4>5>1$, though on the right side the ring fingers were, as usual, longer than the index. In only one man (I.L. 104) was the index finger longer than the ring, thus giving a formula $3>2>4>5>1$. This applied to both of his hands. Unless the left hand was one of the three exceptional ones noted above, the right hand was not inspected.

[1] Wood, Jones: Arboreal Man. London, 1918, p. 75.
Wood, Jones: "The Principles of Anatomy as Seen in the Hand." London, 1920; p. 20.

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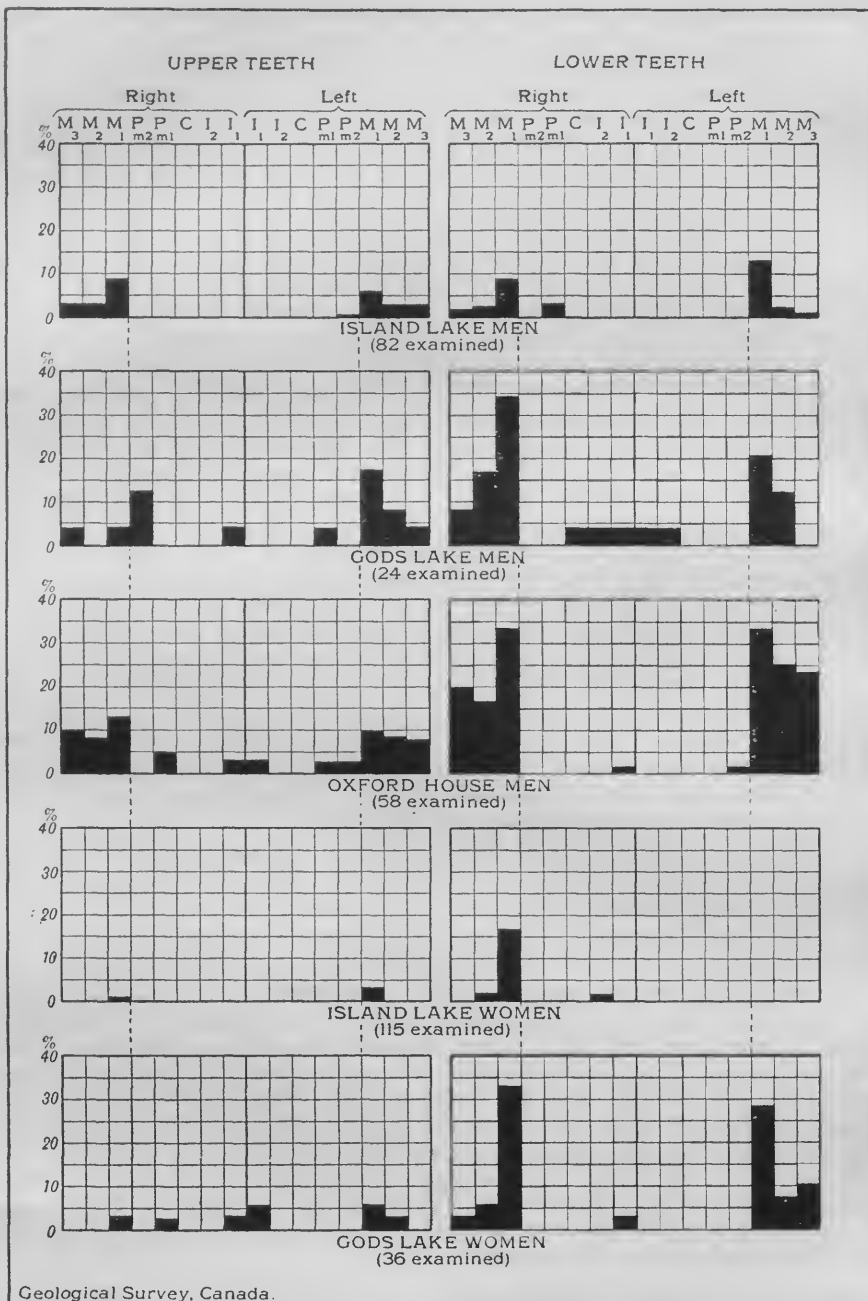
FIGURE 4. Percentage distribution of carious teeth among men and women
(aged 20 years and over).

The observations on the lengths of the fingers were made after the measurements of the left hand had been taken. It was only necessary, after reversing the hand, to inspect the dorsum in order to note whether the tip of the ring finger or of the index projected farther along the nail of the middle finger, and, as the ring was generally very much longer than the index, the observation could generally be made at a glance.

Dental Caries. If any teeth were found to be decayed or missing, their appropriate spaces were scored across on the blank forms that had been prepared and had been taken into the field with this object in view. Though incipient trouble may easily have escaped my notice, it is not likely that any appreciable sized cavity or that any missing tooth is unrecorded.

In a proportion, but it was a very small proportion, of the older men the teeth were well worn and ground down into the secondary dentine; some appeared to have pyorrhoea; but neither of these conditions was confused with caries, neither, I believe, were any cases of unerupted third molars, which were met with in a number of adults, mistaken for extracted third molars, nor for an early loss of first molar teeth.

From appendix X on page 71, one can see the details of the actual distribution of the decayed teeth; and the reader is referred to this. From this appendix it is calculated that:

(1) 78 per cent of the 82 men and old men examined at Island lake had sound teeth. The 18 persons who made up the remaining 22 per cent had among them 47 carious teeth.

(2) 75 per cent of the 115 women and old women examined at Island lake had sound teeth. The 29 persons who made up the remaining 25 per cent had among them 42 carious teeth.

(3) 42 per cent of the 24 men and old men examined at Gods lake had sound teeth. The 14 persons who made up the remaining 58 per cent had among them 41 carious teeth.

(4) 44·5 per cent of the 36 women and old women examined at Gods lake had sound teeth. The 20 persons who made up the remaining 55·5 per cent had among them 41 carious teeth.

(5) 36 per cent of the 58 men and old men examined at Oxford House had sound teeth. The 37 persons who made up the remaining 64 per cent had among them 138 carious teeth.

The accompanying chart gives a very clear picture of the percentage distribution of decayed teeth. From the chart, and from the table above, it will be gathered that:

(a) In a given neighbourhood the percentage of men affected with dental caries is practically equal to the percentage of women affected with dental caries.

(b) At Island lake there was a much smaller percentage of persons with decayed teeth than at Gods lake, and at Gods lake there was an appreciably smaller number than at Oxford House, the percentages being respectively, 22 per cent, 58 per cent, 64 per cent.

(c) Caries affects a larger percentage of lower teeth than upper teeth in the proportion of 70 per cent lower to 30 per cent upper.

(d) The teeth of the right side are affected with about the same frequency as those of the left side. Upper right 49 per cent to upper left 51 per cent; lower right 50 per cent to lower left 50 per cent.

(e) The first lower molars are the most frequent offenders. Of 45 persons with only one decayed tooth, in 71 per cent that tooth is the first lower molar.

The frequency with which the various teeth of male and female adults were affected with dental caries is shown here on a per-thousand basis.

	M_3	M_2	M_1	P_{m2}	P_{m1}	C	I_2	I_1	I_1	I_2	C	P_{m1}	P_{m2}	M_1	M_2	M_3
Upper..............	30	23	60	10	13	—	—	13	13	—	—	10	10	67	33	23
Lower..............	53	67	220	—	7	3	3	10	3	3	—	3	3	207	77	63

(The actual number of teeth affected was 309; for convenience in calculating, the number was assumed to be 300.)

ANTHROPOMETRIC CHARACTERS

The following measurements were taken:

1. Stature
2. Arm stretch (maximum)
3. Sitting height
4. Length of head (glabella ad maximum)
5. Width of head (biparietal maximum)
6. Width of forehead (frontal minimum)
7. Length of face
   (a) Menton-nasion
   (b) Menton-crinion
8. Width of face (bizygomatic maximum)
9. Height of nose
10. Width of nose
11. Length of mouth
12. Length of ear
13. Width of ear
14. Length of upper lip
15. Length of hand
16. Width of hand

And from these measurements the following indices have been calculated:
17. Arm stretch (Arm stretch to stature)
18. Sitting height (Sitting height to stature)
19. Cephalic (Width of head to length of head)
20. Cephalo-facial (Width of face to width of head)
21. Facial [Length of face (Menton-nasion) to width of face]
22. Nasal (Width of nose to height of nose)
23. Ear (Width of ear to length of ear)
24. Hand (Width of hand to length of hand)

TABLE I

Correlation of Oxford House Men (aged 20 years and over)

This table considers only those individuals who possess one or more features that may be regarded as indicative of white admixture.[1]

Serial number	Features and index suggestive of white admixture								Other data			
	Light complexion	Grey eyes	Said to be part white	Some beard or moustache	Hair on cheeks	Bald	Decayed front teeth (not molars)	Cephalo-facial index 94 and under	Cephalo-facial index of over 94	Biparietal	Bizygomatic	Difference between head width and face width in mm.
3		(?)			+	+		93·9		155	145·5	9·5
6			+						96·5	143	138	5
8			+						96·0	152	146	6
9				B M			+		97·4	155·5	151·5	4
12				B M				92·4		157	145	12
13				B M				93·4		159	148·5	10·5
14		+				+			94·8	155	147	8
15			+	B M+			+	93		149·5	139	10·5
17	+	+		B M+			+		99·0	157	155·5	1·5
18	+	+		B M+			+	89·5		157·5	141	16·5
19		+		M					101·5	138·5	140·5	− 2
20		+						92·0		156·5	144	12·5
23				M+					94·2	154·5	145·5	9
26	+			M+				93·9		155	145·5	9·5
28			+		(cleft	palat	e)	92·4		150·5	139	11·5
29								92·4		150·5	139	11·5
33							+	93·5		153	143	10
34								93·5		153	143	10
36	+	+	+	B M+	+			90·6		155	140·5	14·5
38	+								94·7	151·5	143·5	8
39							+		99·3	147·5	146·5	1
40								93·6		148·5	139	9·5
41							+		98·0	153	150	3
43		+							99·3	148	147	1
44		+				+		94·0		159	149·5	9·5
49								92·6		155	143·5	11·5
55	+							91·1		151	137·5	13·5
57	+							93·9		146·5	137·5	9
59						+		94·0		151	142	9
63								92·5		146	135	11

The essence of this part of the report is to be found in the table entitled "Summary of Means and Probable Errors of Means," on page 20. In this table are incorporated, for the sake of convenience, comparable data compiled by Sullivan[2] on the pure and half-blood Siouan Indians. The report of Sullivan, based on a study of 540 full-blood, and 77 half-blood males, 157 full-blood, and 19 half-blood, females, all between the ages of twenty and fifty-nine years, treats of a much more comprehensive series of cases than does this present report, which deals with 140 males and 127 females of like ages.

[1] + = presence of a feature; a blank space = absence of a feature;
B = slight beard; M = medium moustache; M+ = heavy moustache.
[2] In the report on the Siouan Indians, means and their standard deviations are recorded, but in order to make the data on the Siouan Indians more easily comparable with those of this report, the standard deviations have been converted into probable errors of means. *See* footnote on page 20.

Anyone who would analyse the figures from which a particular mean has been calculated, should turn, in the first place, to the appropriate Frequency Distribution Table, where he will find the standard deviation (σ), the probable error of the mean (E_m), the coefficient of variation (V), and the number of cases examined (N), all duly recorded; and, subsequently —if he would pursue his investigation further—let him turn to the appendix, where the particulars of each individual on which this report is based, are fully set out.

The similarity between some of the measurements and the contrast between others are self-apparent and call for but few comments, because table II displays these similarities and contrasts concisely and in tabular form.

It may, perhaps, be of help to some in the understanding of this report, if an explanation is offered as to how the table of means and probable errors of means is to be interpreted, for, unless the significance of the probable error be appreciated, the figures in this, and in certain subsequent tables will fail to convey their meaning.

In this table, No. II, it is stated that the mean or average stature of the men at Island lake is 170·0 cm., and of those at Oxford House, 172·5 cm. The Oxford House men are, therefore, on an average 2·5 cm., that is, one inch taller than the Island Lake men. But what reliance may be placed on these figures? At Island lake sixty-eight and at Oxford House fifty-five men were measured. These numbers are fairly substantial; the measurements were carefully taken; they were checked as they were taken; the men were not selected, but were picked entirely at random. With the expenditure of much time and labour it has been ascertained that the probable error of the mean stature of the Island Lake men is $\pm 0\cdot 48$, and of the Oxford House men $\pm 0\cdot 65$. How probable errors are calculated need not concern us; we may accept them and proceed in the following manner to employ them:

Stature and probable error............Oxford House men....172·5 $\pm$ 0·65
Island Lake men......170·0 $\pm$ 0·48
_____
2·5
_____

The difference in the stature is obviously 2·5 cm. If the probable errors 0·65 and 0·48 be squared, the results are 0·4225 and 0·2304. These when added together become 0·6529, the square root of which is 0·8080.

If this result (0·8080), which is known as the "probable error of the difference" of these two statures (P.E. diff.) be divided into the difference between the statures (2·5 cm.), the answer is 3·1. That is to say, the difference between the statures is 3·1 times greater than the probable error of that difference; or in other words, the ratio between them is as 3·1 is to 1·0. On consulting an appropriate table of odds (*See* next page) it will be seen that this ratio, if translated into terms of odds, will read: "The odds or chances are 26 to 1 in favour of our finding a difference of at least 2·5 cm. (one inch) in the mean statures of the Island Lake and Oxford House men sustained had we been able to measure infinitely larger numbers than circumstances permitted." Or it might be expressed thus:

"Were twenty-seven groups of Cree (Oxford House) and Saulteaux (Island Lake) Indians to be measured, the mean stature of the Cree would be found to exceed that of the Saulteaux by 2·5 cm., or more, in twenty-six out of the twenty-seven groups, whereas in one out of the twenty-seven the difference would be less than 2·5 cm."

This, then, is the basis on which comparisons are to be drawn. The reason for saying in the above that the odds or chances are 26 to 1 is justified by the fact that it has been established mathematically that when a difference divided by the probable error of that difference is

1·0, the odds are as	1·0 to 1·0[1]
2·0,	4·6 to 1·0
2·3,	7·3 to 1·0
2·5,	9·2 to 1·0
2·8,	16·0 to 1·0
3·0,	22·0 to 1·0
3·1,	26·0 to 1·0
3·5,	54·0 to 1·0
4·0,	142·0 to 1·0
5·0,	1,341·0 to 1·0
6·0,	19,300·0 to 1·0
7·0,	427,000·0 to 1·0

Clearly, then, it would in most cases appear reasonable to regard a ratio of 3 to 1 between a difference and its probable error as reliable evidence that the difference was a genuine one, because it implies odds of 22·0 to 1·0. If the ratio be 4, 5, 6, or more, to 1, surely, when dealing with problems such as these, it is tantamount to proof that such differences would still be found to occur were we to measure the entire populations and not be restricted to small samples of them.

In table III a blank space has been left where a difference, P.E. diff., has been found to be less than 2·0, that is to say, where odds are less than 4·6 to 1·0. For example, we learn from table II that the Gods Lake men have an arm stretch of 1·2 cm. less than the Oxford House men, but we do not feel warranted in concluding that this mean difference of 1·2 cm. would be found to persist if we were enabled to measure some hundreds more of these men, on account of the fact that the P.E. diff. (1·18) is almost as great as the difference (1·2) itself.

Arm stretch and probable error........Oxford House men.... $183·7 \pm 0·67$
Gods Lake men....... $182·5 \pm 0·97$

$1·2$

$$\sqrt{(0·67)^2 + (0·97)^2} = \sqrt{0·4489 + 0·9409} = \sqrt{1·3898} = 1·18 = \text{P.E. diff.}$$

Diff./P.E. diff. $= 1·2/1·18 = 1·02 = $ No. of times the difference is greater than the probable error of that difference.

---

[1] This is an excerpt from table 40, "Medical Biometry and Statistics", by Raymond Pearl.

TABLE II

Summary of Means and Probable Errors of Means

(For purposes of comparison, data on the Siouan Indians are included in this table.)

	Males (20–59 years)					Females (20–59 years)			
				Sioux				Sioux	
	Island lake	Gods lake	Oxford House	Pure	Half-bloods	Island lake	Gods lake	Pure	Half-bloods
Maximum number of cases[1]	68	17	55	540	77	100	27	157	19
Stature	170·0	172·0	172·5	172·4	173·5	157·6	158·2	160·0	161·2
	±0·48	±0·75	±0·65	±0·16	±0·52	±0·35	±0·71	±0·28	±0·90
Arm stretch[2]	179·1	180·9	182·1	181·4	182·2	165·8	167·4	168·3	167·4
	±0·48	±0·97	±0·67	±0·20	±0·54	±0·39	±0·48	±0·34	±1·05
Index of arm stretch[2]	105·4	105·2	105·5	105·2	105·0	105·2	105·8	105·3	103·8
	±0·20	±0·35	±0·26	±0·07	±0·17	±0·15	±0·23	±0·13	±0·27
Sitting height	89·9	90·0	88·7	88·5	89·6	83·2	83·3	82·1	83·0
	±0·26	±0·67	±0·33	±0·10	±0·34	±0·22	±0·45	±0·19	±0·76
Index of sitting height	53·0	52·3	51·3	51·4	51·6	52·8	52·6	51·4	51·4
	±0·09	±0·34	±0·14	±0·05	±0·15	±0·09	±0·16	±0·10	±0·43
Cephalic index	79·4	79·0	76·9	79·6	79·4	79·9	79·4	80·5	80·5
	±0·23	±0·43	±0·28	±0·09	±0·20	±0·17	±0·25	±0·15	±0·44
Glabella ad maximum	196·1	194·9	195·9	194·9	194·4	188·4	188·7	187·0	187·3
	±0·57	±0·92	±0·51	±0·18	±0·55	±0·39	±0·52	±0·28	±0·65
Biparietal	155·6	153·8	150·7	155·1	154·3	150·4	149·6	150·9	150·3
	±0·40	±0·68	±0·45	±0·16	±0·38	±0·25	±0·47	±0·26	±0·70
Bizygomatic	146·8	145·7	144·4	149·1	143·4	140·2	139·7	142·8	139·3
	±0·37	±0·93	±0·48	±0·16	±0·43	±0·26	±0·49	±0·27	±0·57
Cephalo-facial index	94·4	94·5	95·9	96·1	92·9	93·2	93·5	94·7	92·5
	±0·17	±0·55	±0·28	±0·09	±0·25	±0·14	±0·26	±0·18	±0·29
Frontal minimum	104·7	106·1	104·5	......	......	102·7	102·9	......	......
	±0·39	±0·55	±0·41			±0·27	±0·41		
Menton-crinion	184·4	186·7	184·6	189·9	186·4	176·0	178·1	179·4	173·6
	±0·67	±1·27	±0·84	±0·30	±0·66	±0·53	±1·19	±0·50	±0·92
Menton-nasion	124·7	127·1	122·9	124·6	121·5	118·5	119·9	117·4	114·1
	±0·50	±0·82	±0·54	±0·18	±0·49	±0·32	±0·64	±0·33	±0·63
Facial index	84·8	87·7	85·2	83·6	84·8	84·6	85·8	82·3	82·2
	±0·37	±0·76	±0·43	±0·14	±0·41	±0·25	±0·55	±0·24	±0·51
Upper lip (length)	16·5	17·9	17·0	......	......	17·4	16·9	......	......
	±0·24	±0·39	±0·24			±0·22	±0·31		
Nose height	54·8	55·2	54·1	58·3	54·9	50·7	50·6	55·2	51·5
	±0·31	±0·58	±0·33	±0·12	±0·27	±0·22	±0·41	±0·19	±0·46
Nose width	39·9	38·2	38·6	39·9	37·6	35·3	34·5	37·4	34·8
	±0·20	±0·62	±0·26	±0·09	±0·24	±0·17	±0·33	±0·16	±0·35
Nasal index	72·9	69·6	71·6	68·8	69·2	70·0	69·2	68·0	67·8
	±0·54	±1·32	±0·60	±0·20	±0·55	±0·42	±0·97	±0·39	±0·99
Mouth (length)	60·6	65·6	60·1	......	......	55·8	58·3	......	......
	±0·34	±1·08	±0·30			±0·32	±0·43		
Ear length	65·9	65·3	67·6	......	......	58·7	59·0	......	......
	±0·35	±0·66	±0·38			±0·29	—		
Ear width	35·4	34·7	35·4	......	......	33·8	31·8	......	......
	±0·21	±0·36	±0·21			±0·15	—		
Ear index	53·6	52·8	52·1	......	......	57·9	54·5	......	......
	±0·28	±0·72	±0·39			±0·42	—		
Hand length	192	192	193	......	......	180	179	......	......
	±0·62	±1·14	±0·62			±0·46	±0·61		
Hand width	86	87	90	......	......	78	80	......	......
	±0·29	±0·53	±0·35			±0·24	±0·41		
Hand index	44·8	45·1	46·5	......	......	43·5	44·5	......	......
	±0·15	±0·28	±0·18			±0·14	±0·27		

[1] The maximum number of cases is recorded here. For some measurements fewer observations were made. The actual number of observations made on a given measurement is recorded in the Frequency Distribution Tables, page 32 et seq.

[2] The arm stretch and index of arm stretch have been corrected. See page 23.

TABLE III

In this table the measurements and the indices of the three bands of Indians are contrasted. The figures in the table record the number of times the difference between two sets of measurements (or of indices) is greater than the probable error of that difference. No entry has been made where the difference is less than twice its probable error. A blank space, therefore, indicates that the two groups of Indians that are being compared closely resemble each other in the measurement (or index) the space represents.

Measurement or index	Males (aged 20-59 years)			Females
	Island lake and Gods lake	Island lake and Oxford House	Gods lake and Oxford House	Island lake and Gods lake
Stature	2·2	3·1		
Arm stretch		3·6		2·6
Arm stretch index				2·2
Sitting height		2·9		
Sitting height index		10·2	2·7	
Cephalic index		6·9	4·1	
Glabella ad maximum				
Biparietal	2·3	8·1	3·8	
Bizygomatic		4·0		
Cephalo-facial index		4·6	2·3	
Frontal minimum	2·1		2·3	
Menton-crinion				
Menton-nasion	2·5	2·4	4·3	
Facial index	3·4		2·9	
Upper lip length	3·1			
Nose height				
Nose width	2·6	4·0		2·2
Nasal index	2·3			
Mouth length	4·4		4·9	4·7
Ear length		3·3	3·0	
Ear width				
Ear index		3·1		
Hand length				
Hand width		8·8	4·7	4·2
Hand index		7·3	4·2	3·3

In comparing the three bands with each other it will be borne in mind that the number of Gods Lake men examined (seventeen in all) is a small one from which to make deductions. We, nevertheless, seem warranted in saying that these Gods Lake men resemble the men of Island lake much more closely than they do those of Oxford House, for on casting the eye down the first column of table III it will be seen that in only three instances is a difference 3·0 or more times as great as its probable error. In other words, in only three features (viz., facial index, length of upper lip, and length of mouth) may it be taken as reasonably certain (the chances being 22 or more to 1) that these features are definitely different in the two bands. How great or how small these mean differences are, the table of means, table II, will tell. Similarly, if the women of Gods lake and Island lake be compared, it will be seen that again in only three features (viz., the length of mouth, the width of hand, and the relative proportions of the

hand) is there any significant difference between them. We may take it, then, that the people of Gods lake, in their physical proportions, resemble very closely the people of Island lake.

If the eye now be carried down column three in which the Gods Lake and Oxford House men are compared, it will be seen that differences in features are well-marked in seven instances, as evidenced by the fact that in seven instances a difference is $3\cdot0$ or more times as great as its probable error; and that in two other instances (viz., sitting height index and facial index) the figure 3 is closely approached ($2\cdot7$ and $2\cdot9$) or stated in terms of chances, that the odds are 14 to 1, and 19 to 1, respectively, in favour of the relative proportions of the length of the body to length of lower limb, and of length of face to width of face, being truly different as recorded in the table of means.

Now, let the second column, which deals with the Island Lake and Oxford House men, be reviewed. It will be found that in this column the figure $3\cdot0$ is exceeded in twelve different instances; in eight of the twelve instances $4\cdot0$ is equalled or exceeded, and in five of the twelve $6\cdot0$ is outdistanced. The Oxford House and Island Lake men, therefore, beyond all reasonable question differ from each other in five respects, if not in eight, very probably in twelve, and perhaps in more.

It may, therefore, be said that of the twenty-five proportions and indices we have elected to measure and calculate, the Gods Lake men and women and the Island Lake men and women are very much alike in all but three; the Gods Lake and Oxford House men in all but seven or eight, and the Island Lake and Oxford House men in all but twelve or thirteen; or this may be expressed in other words by saying that it is reasonably certain that these bands differ from each other in 12 per cent, 30 per cent, and 50 per cent, respectively, of the features on which observations were made.

Stature. The Indians wore either: (a) moccasins, or (b) rubbers, or (c) moccasins and rubbers; very few wore (d) boots. According to the type of footgear worn, either (a) 3 mm., or (b) 6 mm., or (c) 9 mm., or (d) 12 mm., were deducted from the reading on the measuring rod, because experiment showed these to be the correct adjustments to make.

The taking of the stature consumes more time and calls for more frequent readings than does any other proportion except the sitting height. Both are measurements over which the subject has control. If he does not keep his heels together and endeavour to stand erect, or, if standing erect, he throws his head back, an under-reading will be made; if he bends forward an over-reading will result. To ensure that both the subject and the rod were vertical, two 8-inch plumb lines were attached to the top of the rod so that one hung down in front of it, and the other at its side. The interpreter exhorted the subject, who always stood on a level platform, to straighten himself. To manoeuvre an Indian into the position of "attention" is not easy.

The Island Lake men are on an average $170\cdot0$ cm., or $66\cdot9$ inches, tall; the Oxford House men are $2\cdot5$ cm., or 1 inch taller. We might or might not have found, had we been able to measure a larger number of the men at Gods lake, that they were slightly less tall than those at

Oxford House. The women of Island lake and of Gods lake are of similar stature, and are about 12·5 cms., and 13·5 cms., respectively, shorter than the men of the corresponding bands. In drawing conclusions as to the stature of the Gods Lake men, regard must be paid to the relative paucity of the numbers (in fact twelve) measured. At Oxford House, where there is most white blood admixture, the greatest stature is encountered. The mean stature of the twenty-two Oxford House men whom we intercepted at a portage, was estimated to be 176·2 cms.

Arm Stretch, Arm Reach, or Span. The mean arm stretch increases with the mean stature, so that the taller the group the greater is the arm stretch and as a result the index, irrespective of band or sex, hovers around 105·4. This, of course, is slightly higher than that usually recorded for Indians. Personal factors quite likely come into play here, because our statures are not overstated and in the taking of the arm stretch the subjects were encouraged both by word and by example to stretch to their utmost. This resulted in one, two, or even more cms. being added to the first rather effortless attempt. We may repeat what we said on page 7, viz., that in taking this measurement the rod was held in front of the chest, and not behind it, with the result that, as experiment shows, from 1·0 cm. to 1·8 cm. (approximately 1·4 cm.) should be deducted from the arm stretch as recorded in this report in order to make it comparable with measurements taken conventionally.

Sitting Height and Sitting Height Index. As with the stature, so with the sitting height, it was not always feasible to make a correct reading because some cases would not be persuaded to sit erect. For this reason, and because some were round-backed, efforts to take this measurement had in a number of cases to be abandoned. This remark applies especially to the Island Lake women.

The sitting heights of the males at Island lake and at Gods lake are equivalent. So are the sitting heights of the women in these regions; the sexual difference being 6·7 cm.

The Oxford House men are, on an average, shorter in body but longer in limb than the Island Lake and Gods Lake men. This index is the most distinguishing trait of the Oxford House men. It would serve as a hallmark to differentiate a group of Oxford House men from a group of Island Lake men, and probably also from a group of Gods Lake men. It is especially to be noted that the Island Lake men and women both show a bi-modal frequency distribution of sitting height index, which is suggestive that we are dealing here with two groups or races of people, whom we are statistically treating as one. The dip between the two modes in the Island Lake men is at 52·2 index and in the women of Island lake at 52·9 index.

The Head. The head length (glabella ad maximum), the head width (biparietal maximum), and the face width (bizygomatic maximum) were taken with the greatest care and every confidence may be placed in their accuracy.

In obtaining the greatest head width in the women, a considerable amount of trouble was required, and was taken, in order to avoid the hair, which was often firmly plaited and tied at the back of the head, from interfering with the free play of the calipers.

With but two exceptions, the cephalic indices of all bands of both sexes fall between 70·0 and 85·0, the mean for the Island Lake and Gods Lake men and women being approximately 79·5, whereas for the Oxford House men it is 76·9. These, then, are a mesaticephalic people; those at Island lake and at Gods lake tending toward the brachycephalic end of the scale, the Oxford House men toward the dolichocephalic end. The usual sexual difference in the index pertains here, the women having slightly rounder heads than the men. The mean length of head for the men of each of the three bands is practically the same, viz., about 196·0 mm., and for the two bands of women about 188·5 mm. The heads of the women are, therefore, 7·5 mm. shorter than the heads of the men. The length of the head in no wise distinguishes one band from another; neither does the width of the head distinguish the women of Island lake and Gods lake from each other; the mean widths of their heads being about 150·0 mm. It is doubtful, moreover, if the width distinguishes the men of these two bands (Diff./P.E. diff., of this mean for Island Lake and Gods Lake men is only 2·3). The width of the head is, however, of the utmost value in making a differential diagnosis between groups of men from Oxford House and Island lake (Diff./P.E. diff. 8·1), and between groups from Oxford House and Gods lake (Diff./P.E. diff. 3·8). The cephalic index might also equally well be used for purposes of differentiating men of Oxford House from those of the other two bands, for, as it is not in length but in breadth that the heads of these men differ, the cephalic index under present circumstances merely expresses the relation of the width of the head to a constant.

Width of Face and Cephalo-facial Index. On consulting the table of cephalo-facial indices (biparietal-bizygomatic) it is seen that the men of Island lake and Gods lake have almost identical indices, viz., 94·4 and 94·5, respectively, and that the women of these two lakes likewise have almost identical indices, viz., 93·2 and 93·5 respectively. These are, perhaps, slightly low for full-blood Indians. It is surprising to find that the Oxford House men (though unquestionably of greater European admixture than the men of the other two bands) have the high cephalo-facial index of 95·9. This arrests the attention, because it is believed that if there be one index that will discriminate between Indian and Half-breed and between Half-breed and European it is the cephalo-facial index; the index should fall as the amount of white blood increases. In the table, page 40, which describes the distribution of the width of face, it is seen that the Island Lake men have the broadest faces; that the Gods Lake faces are narrower by 1·1 mm. and that the Oxford House faces are narrower by 2·4 mm. This is as we are accustomed to think it should be; the breadth of the zygomatic arch is diminishing or collapsing as the volume of white blood increases. The reason, then, that the Oxford House men have a high cephalo-facial index is not on account of their breadth of face (they have the narrowest of the faces), but on account of their narrow heads for their heads are 4·9 mm. narrower than those of Island lake, whereas their faces are only 2·4 mm. narrower, a difference of practically 2 to 1. Since the difference between the width of face of the Oxford House and the Island Lake men is 4·0 times its probable error, and the difference between their cephalo-facial indices is 4·6 times its probable error, these findings are scarcely to be regarded as illusionary. It would appear, then, that it is

apt to be unsafe to regard the cephalo-facial index as an entity; the diameters from which it is calculated must be considered as integral parts of it and due regard should be paid to them when the index is under consideration. The high cephalo-facial index of the Oxford House men must, therefore, not lead us into the error of regarding them as being of pure Indian stock.

The Face and Lip. When measuring the length of the face, it is, of course, not sufficient to see that the mouth is closed; the teeth must be biting on each other. Attention was paid to this.

It was not unusual for the hair to descend in a V-shaped peak on to the middle of the forehead. When it behaved in this manner, the apex of the peak was selected as the crinion. In this selection, the prescribed rule of marking the crinion as a point on the line that unites the highest part of the hair-line on each side of the forehead, was not followed. This departure, however, does not vitiate the end results of our menton-crinion (hair-line to chin) diameter, because this peculiarity in the hair-line is noted as occurring especially amongst the Gods Lake men. It, therefore, follows that the height of the forehead in these men is slightly understated; and there is no evidence that it differs in the different bands. Of the three bands of men, those at Gods lake have the longest faces (mentonnasion), the greatest facial index (i.e., the roundest faces), and also the widest foreheads. Moreover, they have longer upper lips than the Island Lake men.

Between the men of Island lake and those at Oxford House the differences in these facial proportions are of doubtful significance, though the Oxford House men tend, probably, to have shorter faces; and since they have, as has been stated above, the narrowest of the faces, it follows that their faces are also the smallest.

The Nose. In height of nose there is little, if any, difference between the three bands of men or between the two bands of women. The Gods Lake men have, perhaps, slightly the highest, and the Oxford House slightly the shortest, noses. In width of nose, however, the Island Lake men and women probably exceed for their respective sexes those of the other bands. The nose of the Island Lake men is certainly wider than that of the Oxford House men.

The Mouth. The mouths are large. The Gods Lake men and women have definitely the longest mouths for their respective sexes. The mouth tends to become longer in old age; between the mouths of the Oxford House men, and those of the Island Lake men there is little, if any, difference.

The Ears. Though the ears are of much the same length and of much the same breadth, and, therefore, of much the same index, amongst the three bands of men, those of the Oxford House men are, nonetheless, measurably the longest. With age they increase both in length and breadth, but more especially in length, so that the index tends to fall. The women have rounder ears than the men.

The Hands. It will be seen that the hands of the three groups of men are almost identical in length (192 to 193 mms.) and that those of both groups of women are 12 to 13 mm. shorter. For their respective sex groups, the Island Lake men and women have the narrowest hands and have, therefore, also the lowest indices—a long, narrow hand is characteristic of the Indian. The Oxford House men have the broadest hands

and have, therefore, also the highest hand index. This breadth of hand and this index serve absolutely to differentiate the Oxford House men from those at Island lake. (Diff/P.E. diff., of the breadth is 8·8 and of the index, 7·3.) They, moreover, distinguish the Oxford House from the Gods Lake men (Diff./P.E. diff., being 4·7 and 4·2 for breadth and index respectively). Under the heading of "Descriptive Characters" attention has already been called to the digital formula, page 13.

In concluding, we may compare these northeastern Manitoban Indians with the full-blood and half-blood Sioux. Let us first consider the Oxford House and the half-blood Siouan Indians because the opinion is current that the Oxford House men have coursing in their own veins much white blood. The bands inhabit, as was pointed out in the historical sketch, page 3, the main northern waterway of the white man. Their location has, therefore, obviously offered them opportunities of intermarriage with Europeans, which the other two bands have presumably not had to the same degree. Their general characteristics (e.g., complexion, colour of the eye, the frequency with which they suffer from dental caries, etc.) lend strong support to such a contention. On turning to the table of means on page 20, it at once becomes apparent that there is a very close similarity between them in stature, in arm stretch and its index, in sitting height and its index, and in many other proportions. The exact value of these mean or average measurements becomes apparent when the eye is carried down the fourth column of figures on table IV, which expresses the number of times a difference exceeds its probable error.

TABLE IV

In this table the measurements and the indices of the Island Lake and Oxford House Indians are contrasted with those of Siouan Indians. The figures in the table record the number of times the difference between two sets of a measurement (or of an index) is greater than the probable error of that difference. No entry has been made where a difference is less than twice its probable error. A blank space, therefore, indicates that the two groups of Indians, that are being compared, closely resemble each other in the measurement (or index) the space represents.

Measurement of index	Males (aged 20-59 years)				Females
	Island Lake and pure Sioux	Island Lake and half-blood Sioux	Oxford House and pure Sioux	Oxford House and half-blood Sioux	Island Lake and pure Sioux
Stature................................	4·7	4·9	....	....	5·4
Arm stretch index......................	....	....	....	....	....
Sitting height.........................	5·0	....	....	....	3·8
Sitting height index...................	15·5	8·0	....	....	10·4
Cephalic index.........................	....	....	9·2	7·3	2·6
Glabella ad maximum....................	2·0	2·2	....	....	2·9
Biparietal.............................	....	2·4	9·2	6·1	....
Bizygomatic............................	5·7	6·0	9·3	....	6·9
Cephalo-facial index...................	8·8	5·0	....	8·0	6·6
Menton-crinion........................	7·5	2·1	5·9	....	4·7
Menton-nasion.........................	....	4·6	3·0	....	2·4
Facial index...........................	3·0	....	3·5	....	6·6
Nose height............................	10·5	....	12·0	....	15·5
Nose width.............................	....	7·4	4·7	2·8	9·0
Nasal index............................	7·1	4·8	4·4	3·0	3·5

Of the fifteen spaces, ten, it will be observed, are vacant, because in the features those spaces represent there is practically no difference between the two tribes. In three of the five occupied spaces it is stated that a difference exceeds its probable error more than six times, which is tantamount to saying that the chances are over 19,300 to 1 that the two groups of Indians under consideration differ in the items those spaces represent. These are the cephalic index, the head width (biparietal), and the cephalo-facial index. Of the two indices, the cephalic, of course, denotes the relation the biparietal diameter bears to the glabella ad maximum; the cephalo-facial, the relation the bizygomatic bears to the biparietal diameter.

Since the spaces that represent the glabella ad maximum and the bizygomatic diameters are blank, and the biparietal alone is occupied, it is evident that the biparietal diameter (or head width) is solely responsible for the high ratio of the two indices. And though the Oxford House Indians and the half-blood Sioux differ from each other in these three respects, one factor only, namely the width of head, and not three, is concerned.

At the bottom of the column it is seen that though the figures representing the width of the nose and the nasal index are slightly under $3\cdot0$, that which represents the height of the nose is less than $2\cdot0$, from which it may fairly certainly be assumed that the nose of the half-blood Sioux is slightly narrower than that of the Oxford House Indians. From the above, then, we surmise that the Oxford House Indians have likely as great an admixture of white blood as have the half-blood Sioux, and that of all the physical features with which we have to deal, only in breadth of head and in breadth of nose do they materially differ the one from the other; and especially in breadth of head.

Comparing the Oxford House Crees with the pure Sioux, we gather from the third column of table IV that these two tribes could be distinguished from each other by all the features represented in the table except the proportions of their trunks and limbs, lengths of heads, and their cephalo-facial indices. As we have already pointed out, we must beware of this index and regard it only in association with its component parts. When these are taken into account, it will be seen that the Oxford House head and face are both approximately $4\cdot5$ mm. narrower than the Siouan head and face. The absolute diameters differ very appreciably, but they differ to an equal extent, with the result that the index is unaffected.

Accepting the Oxford House Crees as part-breeds, similar in almost all their general features to the part-breed Sioux, we may note that the features of these part-breed Crees depart from those of the Island and Gods Lake Crees and Saulteaux in the same general direction as the part-breed Sioux do from the pure Sioux. These directions, especially perhaps in the case of the Cree, are towards the Nordic type. Notably is this true of the stature, the width of head, and the width of face, the shortness of the face, the breadth of the hand, and to some extent the breadth of nose and mouth. The high arm stretch of the pure Indian seems to be a dominant trait which persists in the breeds.

The male Crees and Saulteaux of Island lake may be differentiated from the pure Sioux in most of the tabulated features, the length and

breadth of head, the length of face and width of nose, alone excepted, and, between the women of these tribes, differences are detectable in probably all dimensions but the biparietal.

An endeavour has been made to group the people of the three regions in northeastern Manitoba into linguistic divisions; into those who are said to speak Saulteaux, and who were encamped at Smooth Rock on Island lake; into those who are said to speak mixed Saulteaux and Cree, and who dwelt partly at Island lake and partly at Gods lake; and into those who spoke Cree and who lived partly at Gods lake and partly at Oxford House. This grouping is certainly not perfect, since, for example, there are known instances of sisters being married into the two linguistic areas of Island lake, and, to some extent, all areas have been penetrated by intruders from neighbouring bands.

The average stature and sitting height index, together with the different diameters and indices of the head are presented in the accompanying table V, and though the table deals with persons between twenty and fifty-nine years of age, in the case of Gods Lake area those of sixty years and over have been included in order to make the numbers a little more presentable. To have calculated the standard deviations and the probable errors on this new basis would have entailed much labour and time. On that account, means only are recorded.

TABLE V

Average Measurements and Indices of Adults, Arranged According to the Dialect Spoken

Dialect spoken	No. of cases	Stature	Sitting height index	Cephalic index	Cephalo-facial index	Facial index	Head length	Head breadth	Face length	Face breadth	Location
					MALES						
Saulteaux........	25	1710	52·7	80·3	93·9	84·0	195·7	157·0	147·3	123·7	}Island
Mixed Saulteaux {	37 (43)[1]	1690	53·1	79·0	94·7	85·4	196·1	154·8	146·5	125·1	} lake
and Cree {	9–10	1718	52·3	80·0	94·9	87·0	193·6	154·8	146·8	127·6	}Gods
Cree............{	9–10	1722	52·1	77·8	95·5	86·0	199·6	155·3	148·2	126·6	} lake
{	55	1725	51·3	76·9	95·9	85·2	195·9	150·7	144·4	123·0	Oxford House
					FEMALES						
Saulteaux........	32	1578	52·3	80·1	92·5	84·6	188·6	150·4	139·1	117·8	}Island
Mixed Saulteaux {	68	1574	53·7	79·3	93·0	85·0	188·4	150·4	140·8	119·1	} lake
and Cree {	11 (15)[1]	1533	52·8	79·6	94·9	84·0	189·6	150·9	141·7	118·9	}Gods
Cree..............	17 (18)[1]	1613	52·4	79·8	93·1	86·1	188·1	150·1	139·7	120·3	} lake

[1] Though the mean statures and sitting height indices of only 37, 11, and 17 individuals, respectively, are available, the head measurements apply to 43, 15, and 18.

Of the two linguistic groups at Island lake, those who speak the mixed dialect have been supposed to be descendants of the Cree Indians who, a hundred and fifty years, or six generations, ago, intermarried with the Eskimo women at the mouth of Severn river as was stated on page 4. If the people at Island lake who speak the mixed dialect are descendants of those who committed the desperately romantic act tradition attributes to them, we might expect the figures in the accompanying table to give some indication of the fact. If the figures relating to the proportions of the males and females of this group (recorded in the second line of each section of table V) be compared with the figures in the top line of each section of the same table, which refers to those who speak Saulteaux, it will be seen that they have the semblance of belonging to two slightly different types. The figures in the top line of each section, for the most part, rise and fall in unison, as do those of the second line of each section. Only in breadth of face is there complete discord amongst them. The men and women who speak Saulteaux are taller, have a smaller sitting height index, a larger cephalic index, smaller cephalo-facial and facial indices, and shorter faces than the men and women who speak the mixed dialect. In the diameters of the head the women are of identical or of almost identical proportions; in the men, these diameters differ somewhat. Regarded individually, most of the differences appear to be slight; collectively they are suggestive of some meagre difference in build. No measurement of those who speak the mixed dialect of Island lake in any way savours of Eskimoid admixture, neither do the frequency distribution tables appear to lend any support to the story but—this is not to refute it.

Even when divided into linguistic groups, these Indians still display a remarkable degree of homogeneity which is more marked among the women than among the men. Those at Oxford House stand somewhat apart, due doubtlessly, to intermarriage with the European.

The sitting height index, both of the Island Lake men and of the Island Lake women, it will be remembered, was of a bi-modal type. This seemed to be a presage that this region would be found to be inhabited by two distinct types.

It can hardly be said that this forecast has come true, for no other frequency distribution lends it support.

FREQUENCY DISTRIBUTION TABLES

Frequency Distribution of Stature

Stature in cm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
148................................	....	....	....	6	1
151................................	....	....	....	13	3
154................................	1	....	....	17	4
157................................	3	....	....	15	3
160................................	1	....	1	29	10
163................................	4	....	1	11	1
166................................	6	1	4	6	2
169................................	17	5	5	2	0
172................................	13	1	6	1	1
175................................	12	3	6	....	....
178................................	4	2	6	....	....
181................................	0	....	1	....	....
184................................	1	....	1	....	....
Mean..............................	170·0	172·0	172·5	157·6	158·2
σ..................................	±5·65	±3·87	±5·39	±5·22	±5·30
Em.................................	±0·48	±0·75	±0·65	±0·35	±0·71
V..................................	3·32	2·25	3·13	3·31	3·35
N..................................	62	12	31	100	25

ADULTS (AGED 60 YEARS AND OVER)

	Island lake	Gods lake	Oxford House	Island lake	Gods lake
Mean..............................	165·7	171·9	164·1	160·0	157·9
σ..................................	±5·27	....	....	....	....
Em.................................	±1·12	....	....	....	....
V..................................	3·18	....	....	....	....
N..................................	10	6	2	7	5

Distribution of Stature According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10.................	4	129·8	....	....	1	132·9	....	....	....	....	1	130·0
11.................	2	139·7	....	....	1	132·4	....	....	....	....	1	133·6
12.................	2	138·2	....	....	1	133·9	....	....	....	....	1	143·9
13.................	8	146·3	....	....	2	145·2	4	145·7	....	....	2	145·7
14.................	6	149·2	....	....	3	141·5	2	147·5	....	....	3	149·8
15.................	1	158·2	....	....	2	163·2	4	151·5	1	163·2	4	154·7
16.................	4	159·5	....	....	0	....	5	158·0	3	152·6	1	140·3
17.................	5	170·0	....	....	3	149·9	4	160·4	....	....	0	....
18.................	4	169·1	....	....	2	162·2	5	154·0	....	....	0	....
19.................	3	168·1	....	....	1	167·5	8	156·2	....	....	2	156·1
20–59.............	62	170·0	12	172·0	31	172·5	100	157·6	25	158·2	....	....
60+..............	10	165·7	6	171·9	2	164·1	7	160·0	5	157·9	....	....

Frequency Distribution of Arm Stretch[1]

Arm stretch in cm.	Male			Female	
	Island lake.	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
154	....	....	....	2	....
157	....	....	....	6	....
160	....	....	....	7	1
163	....	....	....	20	2
166	....	....	....	20	7
169	3	....	....	19	11
172	5	....	2	13	1
175	6	2	2	4	3
178	6	2	3	4	....
181	21	2	4	0	....
184	12	1	6	1	....
187	3	4	9	....	....
190	4	1	3	....	....
193	0	....	2	....	....
196	1	....	....	....	....
Mean	180·5	182·5	183·7	166·6	168·2
σ	±5·52	±4·97	±5·51	±5·62	±3·55
F_m	±0·48	±0·97	±0·67	±0·39	±0·48
V	3·06	2·73	3·00	3·38	2·11
N	61	12	31	96	25
ADULTS (AGED 60 YEARS AND OVER)					
Mean	177·4	183·9	178·6	167·3	171·9
σ	±6·12	....	....	....	....
E_m	±1·31	....	....	....	....
V	3·45	....	....	....	....
N	10	6	1	7	5

Distribution of Arm Stretch According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	136·8	....	....	1	150·0	....	....	....	....	1	144·6
11	2	144·5	....	....	1	142·6	....	....	....	....	1	141·6
12	2	145·4	....	....	1	151·9	....	....	....	....	1	158·8
13	8	153·5	....	....	2	159·4	4	151·6	....	....	2	162·0
14	6	154·9	....	....	3	155·4	2	156·2	....	....	3	166·0
15	1	166·3	....	....	2	176·8	4	163·5	1	166·7	4	168·0
16	4	167·1	....	....	0	....	5	167·3	3	150·9	1	155·4
17	5	177·9	....	....	3	166·0	4	168·0	....	....	0	....
18	4	180·0	....	....	2	175·6	3	160·6	....	....	0	....
19	3	174·5	....	....	1	181·0	8	167·8	....	....	2	172·3
20–59	61	180·5	12	182·5	31	183·7	96	166·6	25	168·2	....	....
60+	10	177·4	6	183·9	1	178·6	7	167·3	5	171·9	....	....

[1]For correction *See* p. 23, or Table of Means, p. 20.

Frequency Distribution of Index of Arm Stretch[1]

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
100............................	1	....	....	2	....
101............................	0	....	....	0	....
102............................	1	....	1	7	1
103............................	4	....	2	6	0
104............................	4	2	3	13	2
105............................	9	3	6	14	5
106............................	12	3	5	21	7
107............................	13	2	6	13	4
108............................	7	0	4	10	3
109............................	4	1	3	6	3
110............................	3	1	0	3	....
111............................	1	....	0	1	....
112............................	1	....	0	....	....
113............................	1	....	1	....	....
Mean...........................	106·5	106·2	106·3	105·7	106·2
σ...........................	±2·34	±1·77	±2·18	±2·22	±1·68
F_m...........................	±0·20	±0·35	±0·26	±0·15	±0·23
V.............................	2·19	1·67	2·06	2·10	1·58
N.............................	61	12	31	96	25
ADULTS (AGED 60 YEARS AND OVER)					
Mean...........................	106·8	107·0	105·6	104·6	108·9
σ...........................	±1·47	....	....	....	....
E_m...........................	±0·31	....	....	....	....
V.............................	1·38	....	....	....	....
N.............................	10	6	1	7	5

Distribution of Index of Arm Stretch According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10...............	4	105·4	....	....	1	112·9	....	....	....	....	1	111·2
11...............	2	103·5	....	....	1	107·7	....	....	....	....	1	106·0
12...............	2	105·2	....	....	1	113·4	....	....	....	....	1	110·4
13...............	8	104·9	....	....	2	109·7	4	104·1	....	....	2	111·2
14...............	6	103·8	....	....	3	109·7	2	105·9	....	....	3	110·8
15...............	1	105·1	....	....	2	108·3	4	107·9	1	102·1	4	108·7
16...............	4	104·9	....	....	0	....	5	105·9	3	98·8	1	110·8
17...............	5	104·7	....	....	3	110·8	4	104·7	....	....	0	....
18...............	4	106·5	....	....	2	108·2	3	104·2	....	....	0	....
19...............	3	103·8	....	....	1	108·1	8	107·4	....	....	2	110·4
20–59...........	61	106·5	12	106·2	31	106·3	96	105·7	25	106·2	....	....
60+.............	10	106·8	6	107·0	1	105·6	7	104·6	5	108·9	....	....

[1]For correction *See* p. 23, or Table of Means, p. 20.

Frequency Distribution of Sitting Height

Sitting height in cm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
76·0				2	
77·5				1	2
79·0				8	2
80·5				5	3
82·0	1			16	5
83·5	1	2	1	19	2
85·0	3	0	4	12	5
86·5	7	0	5	10	2
88·0	10	1	6	4	3
89·5	9	2	5	1	1
91·0	16	3	5		
92·5	7	3	4		
94·0	5	0	1		
95·5	2	1			
97·0	1				
Mean	89·9	90·0	88·7	83·2	83·3
σ	±3·00	±3·43	±2·69	±2·82	±3·32
E_m	±0·26	±0·67	±0·33	±0·22	±0·45
V	3·34	3·81	3·03	3·38	3·99
N	62	12	31	78	25
ADULTS (AGED 60 YEARS AND OVER)					
Mean	87·0	89·1	85·5	84·0	81·7
σ	±2·65				
E_m	±0·59				
V	3·04				
N	9	6	2	6	6

Distribution of Sitting Height According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	68·5			1	71·6					1	73·9
11	2	73·9			1	71·4					1	73·5
12	2	72·2			1	74·3					1	78·6
13	8	76·6			2	76·3	4	76·3			2	78·1
14	6	78·2			3	77·6	2	77·5			3	81·5
15	1	81·5			2	89·0	4	79·8	1	86·5	4	82·9
16	4	83·5			0		4	82·8	3	80·6	1	79·4
17	5	89·8			3	80·9	3	83·8			0	
18	4	89·0			2	88·2	3	82·6			0	
19	3	89·7			1	91·2	7	82·5			2	85·8
20–59	62	89·9	12	90·0	31	88·7	78	83·2	25	83·3		
60+	9	87·0	6	89·1	2	85·5	6	84·0	6	81·7		

Frequency Distribution of Sitting Height Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
48·0............................	....	1	....	....	....
48·7............................	....	0	3	....	....
49·4............................	....	1	2	1	1
50·1............................	....	0	3	2	1
50·8............................	4	1	6	6	1
51·5............................	15	1	10	16	4
52·2............................	8	1	5	20	7
52·9............................	15	5	2	9	5
53·6............................	11	1	....	17	4
54·3............................	9	1	....	6	0
55·0............................	....	....	....	0	1
55·7............................	....	....	....	1	....
Mean............................	53·0	52·3	51·3	52·8	52·6
σ	±1·07	±1·74	±1·14	±1·18	±1·19
F_m............................	±0·09	±0·34	±0·14	±0·09	±0·16
V............................	2·01	3·33	2·23	2·23	2·26
N............................	62	12	31	78	24

ADULTS (AGED 60 YEARS AND OVER)

Mean............................	52·7	51·9	53·6	52·5	52·0
σ	±1·47	....	....	....	....
F_m............................	±0·33	....	....	....	....
V............................	2·79	....	....	....	....
N............................	9	6	1	5	6

Distribution of Sitting Height Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	4	52·8	....	....	1	53·9	....	....	....	....	1	56·8
11................	2	52·9	....	....	1	53·9	....	....	....	....	1	55·0
12................	2	52·3	....	....	1	55·5	....	....	....	....	1	54·6
13................	8	52·4	....	....	2	52·5	4	52·3	....	....	2	53·6
14................	6	52·4	....	....	3	54·8	2	52·5	....	....	3	54·5
15................	1	51·5	....	....	2	54·5	4	52·7	1	53·0	4	53·6
16................	4	52·3	....	....	0	....	4	52·1	3	52·8	1	56·6
17................	5	52·8	....	....	3	54	3	52·6	....	....	0	....
18................	4	52·7	....	....	2	54·4	3	53·8	....	....	0	....
19................	3	53·4	....	....	1	54·5	7	53·0	....	....	2	55
20–59............	62	53·0	12	52·3	31	51·3	78	52·7	24	52·6	....	....
60+............	9	52·6	6	51·9	1	53·6	5	52·5	6	52·0	....	....

Frequency Distribution of Cephalic Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
65·1			1		
66·4			0		
67·7			0		
69·0			0		
70·3			2		
71·6			1		
72·9	1		6		
74·2	6	1	5	2	
75·5	5	4	8	7	3
76·8	10	1	12	14	4
78·1	8	4	9	26	5
79·4	18	2	6	18	8
80·7	8	2	4	11	4
82·0	4	2	1	10	3
83·3	5	1		6	
84·6	3			5	
85·7				0	
87·2				1	
Mean	79·4	79·0	76·9	79·9	79·4
σ	±2·81	±2·62	±3·06	±2·59	±1·92
E_m	±0·23	±0·43	±0·28	±0·17	±0·25
V	3·54	3·32	3·98	3·24	2·41
N	68	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean	80·0	79·3	80·4	79·8	80·6
σ	±2·91			±3·61	±1·08
E_m	±0·52			±0·63	±0·24
V	3·63			4·52	1·34
N	14	7	4	15	9

Distribution of Cephalic Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	80·5			1	78·5					1	79·8
11	2	80·4			1	81·7					1	79·3
12	2	80·8			1	80·9					1	80·6
13	8	81·4			2	79·4	4	77·8			2	76·4
14	6	81·0			3	80·0	2	79·2			3	80·0
15	1	75·4			2	76·8	4	80·8	1	77·7	4	78·7
16	4	78·4			1	85·6	5	81·1	3	79·7	1	84·8
17	5	78·3			3	78·1	5	78·7			0	
18	4	77·5			2	79·0	5	80·0			0	
19	3	82·4			3	74·9	8	81·4			2	78·4
20–59	68	79·4	17	79·0	55	76·9	100	79·9	27	79·4		
60+	14	80·0	7	79·3	4	80·4	15	79·8	9	80·6		

Frequency Distribution of Length of Head (Glabella Ad Maximum)

Length of head in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
174.	....	....	....	3	....
177.	1	....	....	4	....
180.	1	....	1	8	1
183.	4	1	0	13	7
186.	1	1	0	22	4
189.	7	3	12	24	8
192.	15	4	11	9	5
195.	13	2	14	9	2
198.	8	1	6	8	....
201.	7	5	3	....	....
204.	6	....	5	....	....
207.	3	....	3	....	....
210.	2	....	....	....	....
Mean.	196·1	194·9	195·9	188·4	188·7
σ.	±6·95	±5·63	±5·65	±5·81	±4·03
E_m.	±0·57	±0·92	±0·51	±0·39	±0·52
V.	3·54	2·89	2·88	3·08	2·13
N.	68	17	55	100	27

ADULTS (AGED 60 YEARS AND OVER)

	Male			Female	
Mean.	196·4	200·0	195·5	190·0	190·3
σ.	±6·40	....	....	±10·39	±3·59
E_m.	±1·15	....	....	±1·75	±0·81
V.	3·26	....	....	5·47	1·89
N.	14	7	4	15	9

Distribution of Length of Head According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10.	4	182·0	....	....	1	186·0	....	....	....	....	1	178·0
11.	2	179·0	....	....	1	175·0	....	....	....	....	1	176·5
12.	2	185·0	....	....	1	181·0	....	....	....	....	1	175·5
13.	8	184·0	....	....	2	189·0	4	183·0	....	....	2	188·0
14.	6	186·0	....	....	3	182·0	2	183·0	....	....	3	186·0
15.	1	197·5	....	....	2	194·0	4	186·0	1	193·0	4	185·5
16.	4	187·0	....	....	1	181·0	5	187·0	3	184·0	1	174·0
17.	5	193·0	....	....	3	181·5	5	187·0	....	....	0	....
18.	4	196·0	....	....	2	188·5	5	184·0	....	....	0	....
19.	3	189·5	....	....	3	195·0	8	182·0	....	....	2	185·0
20–59.	68	196·1	17	194·9	55	195·9	100	188·4	27	188·7	....	....
60+.	14	196·4	7	200·0	4	195·5	15	190·0	9	190·3	....	....

Frequency Distribution of Width of Head (Biparietal Maximum)

Width of head in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake

ADULTS (AGED 20 TO 59 YEARS)

Width of head in mm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
135.			1		
138.			2		
141.			1	2	1
144.	3		5	14	3
147.	6	2	11	26	12
150.	6	4	13	28	5
153.	18	8	15	20	4
156.	19	1	5	10	2
159.	6	1	2		
162.	8	0			
165.	2	1			
Mean	155·6	153·8	150·7	150·4	149·6
σ	±4·95	±4·18	±4·94	±3·75	±3·59
Fm	±0·40	±0·68	±0·45	±0·25	±0·47
V	3·18	2·71	3·28	2·49	2·40
N	68	17	55	100	27

ADULTS (AGED 60 YEARS AND OVER)

	Island lake	Gods lake	Oxford House	Island lake	Gods lake
Mean	157·2	158·5	157·0	152·1	153·0
σ	±4·00			±2·57	±2·00
Em	±0·72			±0·43	±0·45
V	2·55			1·69	1·31
N	14	7	4	16	9

Distribution of Width of Head According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	146·0			1	146·0					1	142·0
11	2	144·0			1	143·0					1	140·0
12	2	149·5			1	146·5					1	141·5
13	8	150·0			2	150·0	4	142·5			2	144·0
14	6	150·0			3	145·5	2	144·5			3	149·0
15	1	149·0			2	149·0	4	150·5	1	150·0	4	146·0
16	4	146·5			1	155·0	5	151·0	3	147·0	1	147·5
17	5	151·0			3	142·0	5	147·0			0	
18	4	152·0			2	149·0	5	147·0			0	
19	3	156·0			3	146·0	8	148·0			2	145·0
20–59	68	155·6	17	153·8	55	150·7	100	150·4	27	149·6		
60+	14	157·2	7	158·5	4	157·0	16	152·1	9	153·0		

Frequency Distribution of Width of Face (Bizygomatic Maximum)

Width of face in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
132			1	8	3
135		2	4	18	3
138	4	2	8	27	11
141	14	1	13	22	7
144	16	4	10	23	1
147	17	3	9	2	2
150	7	4	5		
153	8	0	5		
156	2	1			
Mean	146·8	145·7	144·4	140·2	139·7
σ	±4·52	±5·69	±5·26	±3·87	±3·77
E_m	±0·37	±0·93	±0·48	±0·26	±0·49
V	3·03	3·90	3·64	2·76	2·70
N	68	17	55	100	27

ADULTS (AGED 60 YEARS AND OVER)

Mean	149·5	151	148	141·3	143·7
σ	±3·89			±3·27	±4·92
E_m	±0·70			±0·55	±1·11
V	2·60			2·31	3·43
N	14	7	4	16	9

Distribution of Width of Face According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	126·5			1	128·0					1	122·5
11	2	125·5			1	125·0					1	122·5
12	2	134·0			1	135·5					1	128·0
13	8	133·0			2	134·0	4	130·5			2	128·0
14	6	132·5			3	127·5	2	132·5			3	134·0
15	1	135·5			2	138·5	4	140·5	1	137·0	4	131·5
16	4	136·0			1	141·5	5	139·0	3	135·0	1	127·5
17	5	144·0			3	133·0	5	137·5			0	
18	4	141·5			2	140·0	5	135·0			0	
19	3	142·5			3	139·0	8	137·5			2	131·0
20–59	68	146·8	17	145·7	55	144·4	100	140·2	27	139·7		
60+	14	149·5	7	151·0	4	148·0	16	141·2	9	143·7		

Frequency Distribution of Biparietal-Bizygomatic (Cephalo-Facial) Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
88·0	1	1	....	2	....
89·5	0	1	1	6	2
91·0	6	1	2	18	4
92·5	12	3	7	22	5
94·0	19	4	15	28	7
95·5	20	1	6	18	8
97·0	7	3	8	6	1
98·5	2	1	8	....	....
100·0	1	2	5	....	....
101·5	....	....	1	....	....
103·0	....	....	1	....	....
104·5	....	....	1	....	....
Mean	94·4	94·5	95·9	93·2	93·5
σ	±2·08	±3·33	±3·10	±2·08	±2·00
E_m	±0·17	±0·55	±0·28	±0·14	±0·26
V	2·20	3·52	3·23	2·24	2·14
N	68	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean	95·1	95·4	94·4	92·7	93·8
σ	±2·30	....	....	±2·24	±2·29
E_m	±0·41	....	....	±0·38	±0·51
V	2·42	....	....	2·42	2·44
N	14	7	4	16	9

Distribution of Biparietal-Bizygomatic (Cephalo-Facial) Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	4	86·6	....	....	1	87·7	....	....	....	....	1	86·3
11	2	87·3	....	....	1	87·4	....	....	....	....	1	87·5
12	2	89·6	....	....	1	92·5	....	....	....	....	1	90·5
13	8	88·9	....	....	2	89·5	4	91·6	....	....	2	89·2
14	6	88·1	....	....	3	87·9	2	91·7	....	....	3	89·8
15	1	90·9	....	....	2	93·0	4	93·5	1	91·3	4	90·2
16	4	93·0	....	....	1	91·3	5	92·1	3	92·1	1	86·4
17	5	95·4	....	....	3	94·1	5	93·6	....	....	0	....
18	4	93·2	....	....	2	93·8	5	91·8	....	....	0	....
19	3	91·4	....	....	3	95·3	8	93·1	....	....	2	90·4
20–59	68	94·4	17	94·5	55	95·9	100	93·2	27	93·5	....	....
60+	14	95·1	7	95·4	4	94·4	16	92·7	9	93·8	....	....

Frequency Distribution of Width of Forehead (Frontal Minimum)

Width of forehead in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
91.	1	. . . .	. . . .	. . . .	. . . .
94.	3	. . . .	2	5	. . . .
97.	4	. . . .	5	19	4
100.	12	2	11	23	9
103.	16	6	15	32	8
106.	20	6	11	13	5
109.	6	1	7	6	1
112.	3	2	4	2	. . . .
115.	2	. . . .	. . . .	. . . .	. . . .
Mean.	104·7	106·1	104·5	102·7	102·9
σ .	±4·78	±3·38	±4·47	±4·01	±3·18
E_m.	±0·39	±0·55	±0·41	±0·27	±0·41
V.	4·57	3·18	4·23	3·91	3·09
N.	67	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean.	103·4	107	108	102·1	105·0
σ .	±2·82	. . . .	. . . .	±2·78	±3·46
E_m.	±0·51	. . . .	. . . .	±0·47	±0·78
V.	2·73	. . . .	. . . .	2·72	3·30
N.	14	7	4	16	9

Distribution of Width of Forehead According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10.	2	99·0	. . . .	. . . .	1	101·0	. . . .	. . . .	. . . .	. . . .	1	101·0
11.	0	. . . .	. . . .	. . . .	1	97·0	. . . .	. . . .	. . . .	. . . .	1	96·0
12.	2	100·0	. . . .	. . . .	1	106·0	. . . .	. . . .	. . . .	. . . .	1	101·0
13.	8	102·0	. . . .	. . . .	2	103·0	4	100·0	. . . .	. . . .	2	101·5
14.	6	104·0	. . . .	. . . .	3	100·0	2	103·5	. . . .	. . . .	3	104·0
15.	1	105·0	. . . .	. . . .	2	105·0	4	105·0	1	111·0	4	102·5
16.	4	103·5	. . . .	. . . .	1	101·0	5	106·5	3	103·0	1	95·0
17.	5	103·0	. . . .	. . . .	3	99·0	5	101·5	. . . .	. . . .	0	. . . .
18.	4	107·0	. . . .	. . . .	2	101·5	5	102·5	. . . .	. . . .	0	. . . .
19.	3	105·0	. . . .	. . . .	3	103·0	8	103·0	. . . .	. . . .	2	101·0
20–59.	67	104·7	17	106·1	55	104·5	100	102·6	27	102·9	. . .	. . . .
60+.	14	103·4	7	107·0	4	108·0	16	102·1	9	105·0	. . .	. . . .

Frequency Distribution of Length of Face (Menton-Crinion)

Length of face in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
155...............................	....	....	....	2	....
160...............................	....	....	1	2	1
165...............................	3	....	2	20	6
170...............................	4	2	2	18	2
175...............................	15	2	12	27	6
180...............................	11	0	13	16	5
185...............................	14	7	8	11	5
190...............................	14	3	8	3	0
195...............................	6	3	5	1	2
200...............................	1	....	4	....	....
Mean...............................	184·4	186·7	184·6	176·0	178·1
σ...............................	±8·20	±7·76	±9·22	±7·85	±9·16
E_m...............................	±0·67	±1·27	±0·84	±0·53	±1·19
V...............................	4·45	4·16	5·00	4·46	5·14
N...............................	68	17	55	100	27

ADULTS (AGED 60 YEARS AND OVER)

	Island lake	Gods lake	Oxford House	Island lake	Gods lake
Mean...............................	186·3	187·0	187·0	176·3	173·1
σ...............................	±7·76	....	....	±9·29	±4·58
E_m...............................	±1·40	....	....	±1·62	±1·03
V...............................	4·17	....	....	5·27	2·65
N...............................	14	7	4	15	9

Distribution of Length of Face According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10...............	2	166·0	....	....	1	163·0	....	....	....	....	1	147·0
11...............	0	....	....	....	1	162·0	....	....	....	....	1	162·0
12...............	2	168·5	....	....	1	160·0	....	....	....	....	1	159·0
13...............	8	165·0	....	....	2	169·5	4	160·5	....	....	2	164·0
14...............	6	169·0	....	....	3	168·0	2	169·0	....	....	3	182·0
15...............	1	184·0	....	....	2	185·5	4	171·5	1	157·0	4	173·0
16...............	4	173·5	....	....	1	174·0	5	175·0	3	169·0	1	160·0
17...............	5	186·5	....	....	3	176·0	5	173·0	....	....	0	....
18...............	4	180·5	....	....	2	189·0	5	177·5	....	....	0	....
19...............	3	184·0	....	....	3	182·0	8	174·5	....	....	2	173·0
20–59............	68	184·3	17	186·7	55	184·6	100	175·9	27	178·1	....	....
60+.............	14	186·3	7	187·0	4	187·0	15	176·4	9	173·1	....	....

Frequency Distribution of Length of Face (Menton-Nasion)

Length of face in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
104................................	1	....	....	1	....
107................................	0	....	1	2	1
110................................	2	....	2	5	0
113................................	1	....	1	20	2
116................................	5	....	6	25	8
119................................	9	2	13	15	9
122................................	13	4	13	21	3
125................................	19	5	6	10	1
128................................	5	1	8	1	2
131................................	9	3	4	....	1
133................................	2	1	0	....	....
137................................	2	1	0	....	....
140................................	....	....	1	....	....
Mean...........................	124·7	127·1	122·9	118·5	119·9
σ.................................	±6·16	±5·03	±5·90	±4·77	±4·93
E_m...............................	±0·50	±0·82	±0·54	±0·32	±0·64
V.................................	4·94	3·96	4·80	4·03	4·11
N.................................	68	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean...........................	127·3	125·5	126·0	118·1	119·0
σ.................................	±6·96	....	....	±4·85	±5·48
F_m...............................	±1·26	....	....	±0·82	±1·23
V.................................	5·47	....	....	4·10	4·60
N.................................	14	7	4	16	9

Distribution of Length of Face According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	107·0	....	....	1	102·0	....	....	....	....	1	101·0
11................	1	101·0	....	....	1	102·0	....	....	....	....	1	109·0
12................	2	113·5	....	....	1	109·0	....	....	....	....	1	101·0
13................	8	111·5	....	....	2	112·5	4	107·0	....	....	2	110·5
14................	6	112·0	....	....	3	113·0	2	109·5	....	....	3	118·0
15................	1	121·0	....	....	2	123·0	4	111·0	1	114·0	4	115·5
16................	4	116·0	....	....	1	118·0	5	115·0	3	113·0	1	101·0
17................	5	127·0	....	....	3	116·0	5	117·5	....	....	0	....
18................	4	123·5	....	....	2	128·0	5	118·5	....	....	0	....
19................	3	120·0	....	....	3	122·0	8	115·0	....	....	2	115·0
20–59............	68	124·7	17	127·1	55	122·9	100	118·5	27	119·9	....	....
60+..............	14	127·3	7	125·5	4	126·0	16	118·1	9	119·0	....	....

Frequency Distribution of Facial Index (Menton-Nasion-Bizygomatic Maximum)

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
69·3	1	....	....	....	....
71·4	0	....	....	....	....
73·5	0	....	1	1	....
75·6	1	....	3	1	1
77·7	4	1	2	6	0
79·8	10	1	6	18	4
81·9	15	2	11	15	2
84·0	12	2	10	23	9
86·1	12	3	6	20	6
88·2	6	3	9	9	1
90·3	3	1	4	5	2
92·4	2	3	1	2	1
94·5	1	1	1	....	0
96·6	1	....	1	....	1
Mean	84·8	87·7	85·2	84·6	85·8
σ	±4·49	±4·65	±4·74	±3·71	±4·24
E_m	±0·37	±0·76	±0·43	±0·25	±0·55
V	5·30	5·31	5·57	4·38	4·95
N	68	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean	85·6	83·0	85·0	84·1	82·4
σ	±4·66	....	....	±3·86	±4·29
E_m	±0·84	....	....	±0·65	±0·96
V	5·44	....	....	4·59	5·20
N	14	7	4	16	9

Distribution of Facial Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	2	85·0	....	....	1	79·7	....	....	....	....	1	82·5
11	1	81·5	....	....	1	81·6	....	....	....	....	1	89·0
12	2	84·8	....	....	1	80·4	....	....	....	....	1	78·9
13	8	83·6	....	....	2	83·8	4	81·9	....	....	2	86·3
14	6	84·4	....	....	3	88·8	2	82·6	....	....	3	88·2
15	1	89·3	....	....	2	88·8	4	78·8	1	83·2	4	87·8
16	4	85·3	....	....	1	83·4	5	82·8	3	83·4	1	79·2
17	5	88·3	....	....	3	87·2	5	85·4	....	....	0	....
18	4	87·3	....	....	2	91·6	5	87·9	....	....	0	....
19	3	84·1	....	....	3	88·1	8	83·4	....	....	2	87·9
20–59	68	84·8	17	87·7	55	85·2	100	84·6	27	85·8	....	....
60+	14	85·6	7	83·0	4	85·0	16	84·1	9	82·4	....	....

Frequency Distribution of Length of Upper Lip

Length of upper lip in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island Lake	Gods Lake
ADULTS (AGED 20 TO 59 YEARS)					
9..	3	....	....	....	....
11..	3	....	1	2	....
13..	7	2	8	7	6
15..	20	2	15	16	6
17..	19	7	13	18	6
19..	11	3	11	14	8
21..	4	3	3	10	1
23..	1	....	1	....	....
25..	....	....	....	....	....
Mean..........................	16·5	17·9	17·0	17·4	16·9
σ	±2·90	±2·40	±2·55	±2·63	±2·42
E_m..........................	±0·24	±0·39	±0·24	±0·22	±0·31
V..............................	17·54	13·44	15·01	15·08	14·33
N...............................	68	17	52	67	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean..........................	19·7	20	19	16·8	18·8
σ	....	....	....	±2·63	±3·40
E_m..........................	....	....	....	±0·63	±0·76
V..............................	....	....	....	15·72	18·05
N...............................	6	7	4	8	9

Distribution of Length of Upper Lip According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	0	....	....	....	1	13·0	....	....	....	....	1	10·0
11................	0	....	....	....	1	15·0	....	....	....	....	1	13·0
12................	2	16·0	....	....	1	18·0	....	....	....	....	1	12·0
13................	5	15·0	....	....	2	16·5	2	14·0	....	....	2	16·5
14................	2	16·0	....	....	3	18·0	0	....	....	....	3	13·0
15................	1	16·0	....	....	2	17·5	2	15·5	1	19·0	4	16·0
16................	1	18·0	....	....	1	18·0	3	15·0	3	14·0	1	14·0
17................	5	17·0	....	....	3	13·0	3	15·0	....	....	0	....
18................	3	20·0	....	....	2	15·5	2	13·0	....	....	0	....
19................	3	18·0	....	....	3	18·0	6	16·5	....	....	2	14·0
20–59.............	68	16·5	17	17·8	52	17·0	67	17·4	27	16·9	....	....
60+...............	6	19·7	7	20·0	4	19·0	8	16·7	9	18·8	....	....

Frequency Distribution of Height of Nose

Height of nose in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
41..............................	....	....	....	1	1
44..............................	....	....	2	8	1
47..............................	4	1	3	27	7
50..............................	18	2	10	36	11
53..............................	19	7	21	19	6
56..............................	14	4	12	8	1
59..............................	10	2	6	....	....
62..............................	3	1	....	....	....
65..............................	....	....	....	....	....
Mean..............................	54·8	55·2	54·1	50·7	50·6
S.D..............................	±3·83	±3·57	±3·56	±3·27	±3·13
P.E..............................	±0·31	±0·58	±0·33	±0·22	±0·41
C. of V..............................	6·99	6·47	6·58	6·46	6·19
No..............................	68	17	54	99	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean..............................	57·6	55·5	56·5	52·6	52·3
S.D..............................	±3·62	....	....	±3·61	±2·05
P.E..............................	±0·65	....	....	±0·63	±0·46
C. of V..............................	6·23	....	....	6·87	3·93
No..............................	14	7	4	15	9

Distribution of Height of Nose According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10..............	2	47	...	......	1	46	...	......	...	......	1	41
11..............	0	......	...	......	1	44	...	......	...	......	1	48
12..............	2	51	...	......	1	47	...	......	...	......	1	48
13..............	8	48	...	......	2	45	3	44	...	......	2	45
14..............	2	49	...	......	3	46	1	46	...	......	3	49
15..............	1	52	...	......	2	53	3	45	1	48	4	47
16..............	3	50	...	......	1	52	4	49	3	47	1	43
17..............	5	52	...	......	3	52	5	48	...	......	0	......
18..............	3	54	...	......	2	53	4	50	...	......	0	......
19..............	3	51	...	......	3	50	8	49	...	......	2	50
20–59..........	68	54·7	17	55·2	54	54·1	99	50·7	27	50·5	...	......
60+..........	14	57·6	7	55·5	4	56·5	15	52·6	9	52·3	...	......

Frequency Distribution of Width of Nose

Width of nose in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
29..	....	1	....	2	2
31..	....	0	....	10	4
33..	....	2	3	24	6
35..	5	2	10	36	10
37..	14	4	15	17	3
39..	23	3	12	9	2
41..	18	2	9	0	....
43..	6	3	4	1	....
45..	1	....	1	....	....
47..	1	....	....	....	....
Mean...........................	39·9	38·2	38·6	35·3	34·5
S.D...........................	±2·41	±3·82	±2·79	±2·46	±2·57
P.E...........................	±0·20	±	±0·26	±0·17	±0·33
C. of V...........................	6·04	9·99	7·23	6·97	7·45
No...........................	68	17	54	99	27

ADULTS (AGED 60 YEARS AND OVER)

Mean...........................	39·9	43·8	39·5	37·2	39·3
σ...........................	±2·64	....	....	±2·05	±3·46
Em...........................	±0·48	....	....	±0·36	±0·78
V...........................	6·61	....	....	5·50	8·80
N...........................	14	7	4	15	9

Distribution of Width of Nose According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	30	....	....	1	31	....	....	....	....	1	32
11................	0	....	....	....	1	34	....	....	....	....	1	30
12................	2	33	....	....	1	31	....	....	....	....	1	31
13................	8	32	....	....	2	33	3	32	....	....	2	31
14................	2	33	....	....	3	32	1	35	....	....	3	32
15................	1	36	....	....	2	35	3	34	1	38	4	33
16................	3	36	....	....	1	38	4	35	3	34	1	35
17................	5	37	....	....	3	34	5	35	....	....	0	....
18................	3	38	....	....	2	35	4	36	....	....	0	....
19................	3	38	....	....	3	36	8	35	....	....	2	34
20–59............	68	39·9	17	38·2	54	38·6	99	35·3	27	34·5	....	....
60+.............	14	39·9	7	43·8	4	39·5	15	37·2	9	39·3	....	....

Frequency Distribution of Nasal Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
45................................	....	1	....	....	....
50................................	....	0	....	....	1
55................................	....	0	....	3	1
60................................	9	3	10	16	3
65................................	13	3	10	26	10
70................................	16	5	14	34	9
75................................	19	4	16	15	0
80................................	9	1	3	2	1
85................................	2	....	0	3	2
90................................	....	....	1	....	....
Mean...........................	72·9	69·6	71·6	70·0	69·2
σ..................................	±6·64	±8·07	±6·59	±6·19	±7·49
Eₘ................................	±0·54	±1·32	±0·60	±0·42	±0·97
V..................................	9·11	11·58	9·20	8·84	10·83
N..................................	68	17	54	99	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean...........................	69·9	79	70·2	71·3	75·9
σ..................................	±6·74	....	....	±6·55	±8·75
Eₘ................................	±1·21	....	....	±1·14	±1·97
V..................................	9·65	....	....	9·18	11·53
N..................................	14	7	4	15	9

Distribution of Nasal Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	63·9	....	....	1	67·4	....	....	....	....	1	78·1
11................	0	....	....	....	1	77·3	....	....	....	....	1	62·5
12................	2	64·7	....	....	1	66·0	....	....	....	....	1	64·6
13................	8	66·8	....	....	2	72·3	3	72·9	....	....	2	69·6
14................	2	67·1	....	....	3	69·6	1	76·1	....	....	3	66·3
15................	1	69·2	....	....	2	65·1	3	75·1	1	79·2	4	69·9
16................	3	71·6	....	....	1	73·1	4	73·5	3	72·5	1	81·4
17................	5	70·1	....	....	3	64·9	5	73·8	....	....	0	......
18................	3	69·9	....	....	2	65·9	4	71·7	....	....	0	......
19................	3	74·7	....	....	3	71·8	8	72·7	....	....	2	68·8
20–59............	68	72·9	17	69·6	54	71·6	99	70·0	27	69·2	....	....
60+...............	14	69·8	7	79·0	4	70·2	15	71·3	9	75·9	....	....

Frequency Distribution of Length of Mouth

Length of mouth in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
36	....	....	....	2	....
39	....	....	....	0	....
42	....	....	....	0	....
45	....	....	....	0	....
48	....	....	....	6	....
51	3	....	2	18	2
54	8	2	7	29	5
57	17	2	10	27	11
60	17	8	25	15	7
63	16	4	9	1	1
66	6	0	2	1	1
69	0	0	....	1	....
72	1	1	....	....	....
Mean	60·6	65·6	60·1	55·8	58·3
σ	±4·16	±6·62	±3·33	±4·68	±3·30
E_m	±0·34	±1·08	±0·30	±0·32	±0·43
V	6·86	10·09	5·54	8·39	5·66
N	68	17	55	100	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean	58·2	70·0	63·5	56·5	63·3
σ	±3·42	....	....	±4·47	±3·40
E_m	±0·64	....	....	±0·75	±0·76
V	5·88	....	....	7·92	5·37
N	13	7	4	16	9

Distribution of Length of Mouth According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	2	47·0	....	....	1	48·0	....	....	....	....	1	50
11	0	......	....	....	1	53·0	....	....	....	....	1	52
12	2	52·0	....	....	1	57·0	....	....	....	....	1	51
13	8	52·3	....	....	2	53·0	4	49·8	....	....	2	50
14	2	53·0	....	....	3	50·0	1	49·0	....	....	3	50
15	1	57·0	....	....	2	54·0	4	53·0	1	55·0	4	50
16	3	56·0	....	....	1	56·0	4	52·0	3	56·0	1	45
17	5	55·4	....	....	3	54·0	5	53·4	....	....	0	......
18	3	60·0	....	....	2	59·0	5	56·0	....	....	0	......
19	3	57·0	....	....	3	56·0	8	53·9	....	....	2	52
20–59	68	60·6	17	65·6	55	60·1	100	55·8	27	58·3	....	....
60+	13	58·2	7	70·0	4	63·5	16	56·5	9	63·3	....	....

Frequency Distribution of Length of Ear

Length of ear in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TC 59 YEARS)					
32........................				1	
35........................				0	
38........................				0	
41........................				0	
44........................				0	
47........................				0	
50........................	1			0	
53........................	0			14	1
56........................	1	1		27	1
59........................	9	1	5	31	3
62........................	12	7	8	15	1
65........................	18	2	14	4	
68........................	16	4	13		
71........................	10	2	11		
74........................			4		
77........................					
Mean.....................	65·9	65·3	67·6	58·7	59·0
σ........................	±4·30	±4·05	±4·16	±4·16	
Eₘ.......................	±0·35	±0·66	±0·38	±0·29	
V........................	6·53	6·21	6·15	7·09	
N........................	67	17	55	92	6
ADULTS (AGED 60 YEARS AND OVER)					
Mean.....................	68·5	73·0	69·0	63·0	69·0
σ........................	±3·30			±4·24	
Eₘ.......................	±0·62			±0·76	
V........................	4·81			6·73	
N........................	13	7	4	14	2

Distribution of Length of Ear According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	59·0			1	59·0					0	
11................	0				1	72·0					0	
12................	2	59·0			1	61·0					0	
13................	7	55·4			2	64·0	3	56·0			0	
14................	2	58·0			3	62·0	1	56·0			0	
15................	1	60·0			2	66·0	4	56·8			0	
16................	3	62·0			1	62·0	3	60·0	2	57·0	0	
17................	5	62·6			3	61·0	4	56·0			0	
18................	3	62·0			2	62·0	3	60·0			0	
19................	3	62·0			3	65·0	7	56·7			0	
20–59............	67	65·9	17	65·3	55	67·6	92	58·7	6	59·0		
60+..............	13	68·5	7	73·0	4	69·0	14	63·0	2	69·0		

Frequency Distribution of Width of Ear

Width of ear in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
29.	1	....	1	4	1
31.	7	3	6	25	3
33.	15	5	10	27	2
35.	24	6	23	27	....
37.	14	2	9	9	....
39.	3	1	6	....	....
41.	3	....	....	....	....
Mean.	35·4	34·7	35·4	33·8	31·8
σ	±2·50	±2·18	±2·35	±2·11	....
Eₘ.	±0·21	±0·36	±0·21	±0·15	....
V.	7·07	6·27	6·64	6·25	....
N.	67	17	55	92	6
ADULTS (AGED 60 YEARS AND OVER)					
Mean.	35·8	37	36·5	34·5	34
σ	±2·81	....	....	±2·48	....
Eₘ.	±0·53	....	....	±0·45	....
V.	7·85	....	....	7·18	....
N.	13	7	4	14	2

Distribution of Width of Ear According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10.	2	34	....	....	1	36	....	....	....	....	0	....
11.	0	....	....	....	1	36	....	....	....	....	0	....
12.	2	36	....	....	1	33	....	....	....	....	0	....
13.	7	33	....	....	2	36	3	32	....	....	0	....
14.	2	35	....	....	3	33	1	36	....	....	0	....
15.	1	32	....	....	2	32	4	32	....	....	0	....
16.	3	35	....	....	1	36	3	33	2	34·5	0	....
17.	5	34	....	....	3	33	4	34	....	....	0	....
18.	3	36	....	....	2	32	3	33	....	....	0	....
19.	3	37	....	....	3	35	7	34	....	....	0	....
20–59.	67	35·4	17	34·7	55	35·3	92	33·8	6	31·8	....	....
60+.	13	35·8	7	37·0	4	36·5	14	34·5	2	34·0	....	....

Frequency Distribution of Ear Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake

ADULTS (AGED 20 TO 59 YEARS)

Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
43................................	....	....	3	....	....
46................................	5	3	9	....	....
49................................	12	4	12	6	1
52................................	22	5	15	16	3
55................................	22	3	11	23	0
58................................	4	0	4	27	2
61................................	2	2	0	12	....
64................................	....	....	1	7	....
67................................	....	....	....	0	....
100...............................	....	....	....	1	....
Mean..........................	53·6	52·8	52·1	57·9	54·5
σ	±3·38	±4·42	±4·31	±5·98	....
Em.............................	±0·28	±0·72	±0·39	±0·42	....
V...............................	6·30	8·37	8·26	10·32	....
N..............................	67	17	55	92	6

ADULTS (AGED 60 YEARS AND OVER)

	Island lake	Gods lake	Oxford House	Island lake	Gods lake
Mean..........................	52·1	50·8	52·7	54·7	49·4
σ	±3·41	....	....	±4·04	....
Em.............................	±0·64	....	....	±0·73	....
V...............................	6·54	....	....	7·39	....
N..............................	13	7	4	14	2

Distribution of Ear Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	56·8	....	......	1	61·0	....	....	....	....	0	....
11................	0	......	....	......	1	50·0	....	....	....	....	0	....
12................	2	60·2	....	......	1	54·1	...	....	....	....	0	....
13................	7	60·1	1	......	2	56·0	3	56·6	....	....	0	....
14................	2	59·5	....	......	3	52·7	1	64·3	....	....	0	....
15................	1	53·3	....	......	2	47·7	4	56·4	....	....	0	....
16................	3	56·4	....	......	1	58·1	3	55·5	2	60·6	0	....
17................	5	54·0	....	......	3	54·5	4	60·5	....	....	0	....
18................	3	57·9	....	......	2	51·6	3	55·6	....	....	0	....
19................	3	60·3	....	......	3	53·6	7	60·0	....	....	0	....
20–59............	67	53·6	17	52·8	55	52·1	92	57·9	6	54·5	....	....
60+..............	13	52·1	7	50·8	4	52·7	14	54·7	2	49·4	....	....

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Frequency Distribution of Length of Hand

Length of hand in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
165	.	.	.	6	1
170	.	.	.	10	4
175	3	1	2	32	9
180	7	2	4	27	11
185	13	3	10	16	2
190	18	4	18	4	.
195	14	5	12	2	.
200	7	2	8	1	.
205	4	.	0	.	.
210	.	.	1	.	.
Mean	192	192	193	180	179
σ	±7·43	±6·96	±6·84	±6·75	±4·71
E_m	±0·62	±1·14	±0·62	±0·46	±0·61
V	3·86	3·63	3·55	3·75	2·64
N	66	17	55	98	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean	191	196	196	181	181
σ	±8·28	.	.	±8·93	±6·82
E_m	±1·49	.	.	±1·74	±1·63
V	4·33	.	.	4·94	3·76
N	14	7	4	12	8

Distribution of Length of Hand According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	2	148	.	.	1	157	.	.	.	.	1	156
11	0	.	.	.	1	146	.	.	.	.	1	157
12	2	159	.	.	1	167	.	.	.	.	1	173
13	7	166	.	.	2	167	3	168	.	.	2	174
14	2	166	.	.	3	165	1	156	.	.	3	179
15	1	182	.	.	2	189	4	179	1	187	4	177
16	3	178	.	.	1	190	4	180	3	170	1	161
17	5	193	.	.	3	183	5	182	.	.	0	.
18	4	193	.	.	2	183	3	176	.	.	0	.
19	3	187	.	.	3	195	8	180	.	.	2	184
20–59	66	192	17	192	55	193	98	180	27	179	.	.
60+	14	191	7	197	4	196	12	181	8	181	.	.

Frequency Distribution of Width of Hand

Width of hand in mm.	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
70................................	....	....	....	5	1
73................................	....	....	....	18	0
76................................	1	....	....	26	10
79................................	5	1	1	36	8
82................................	12	2	4	10	7
85................................	26	7	12	2	1
88................................	13	4	13	1	....
91................................	9	3	19	....	....
94................................	....	....	4	....	....
97................................	....	....	2	....	....
Mean.............................	86·0	87·0	90·0	78·0	80·0
σ..............................	±3·49	±3·24	±3·80	±3·50	±3·13
E_m.............................	±0·29	±0·53	±0·35	±0·24	±0·41
V................................	4·05	3·73	4·24	4·48	3·94
N................................	66	17	55	98	27

ADULTS (AGED 60 YEARS AND OVER)

Mean.............................	88·0	89·0	89·0	79·0	82·0
σ..............................	±3·72	....	....	±3·77	±1·45
E_m.............................	±0·67	....	....	±0·73	±0·35
V................................	4·25	....	....	4·78	1·77
N................................	14	7	4	12	8

Distribution of Width of Hand According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10..............	2	65	....	....	1	66	....	....	....	....	1	65
11..............	0	....	....	....	1	64	....	....	....	....	1	65
12..............	2	68	....	....	1	71	....	....	....	....	1	76
13..............	7	70	....	....	2	77	3	70	....	....	2	70
14..............	2	73	....	....	3	74	1	72	....	....	3	77
15..............	1	80	....	....	2	88	4	77	1	77	4	76
16..............	3	78	....	....	1	85	4	78	3	77	1	71
17..............	5	86	....	....	3	82	5	77	....	....	0	....
18..............	4	86	....	....	2	82	3	77	....	....	0	....
19..............	3	83	....	....	3	88	8	76	....	....	2	78
20–59..........	66	86	17	87	55	90	98	78	27	80	....	....
60+..........	14	88	7	89	4	89	12	79	8	82	....	....

Frequency Distribution of Hand Index

Index	Male			Female	
	Island lake	Gods lake	Oxford House	Island lake	Gods lake
ADULTS (AGED 20 TO 59 YEARS)					
37..........................	....	....	....	1	....
39..........................	1	....	....	6	1
41..........................	3	1	....	21	3
43..........................	26	5	7	42	8
45..........................	26	7	24	21	12
47..........................	9	4	14	7	2
49..........................	1	....	9	....	1
51..........................	....	....	1	....	....
Mean..........................	44·8	45·1	46·5	43·5	44·5
σ..........................	±1·76	±1·71	±1·94	±2·05	±2·06
E_m..........................	±0·15	±0·28	±0·18	±0·14	±0·27
V..........................	3·94	3·79	4·17	4·72	4·63
N..........................	66	17	55	98	27
ADULTS (AGED 60 YEARS AND OVER)					
Mean..........................	45·6	45·1	45·2	43·8	45·0
σ..........................	±2·33	....	....	±2·29	±1·32
E_m..........................	±0·42	....	....	±0·45	±0·32
V..........................	5·10	....	....	5·21	2·94
N..........................	14	7	4	12	8

Distribution of Hand Index According to Age

Age in years	Male						Female					
	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10................	2	43·6	....	....	1	42·0	....	....	....	....	1	41·7
11................	0	....	....	....	1	43·8	....	....	....	....	1	41·4
12................	2	42·8	....	....	1	42·5	....	....	....	....	1	43·9
13................	7	42·2	....	....	2	46·0	3	41·8	....	....	2	40·3
14................	2	43·7	....	....	3	44·9	1	46·2	....	....	3	42·9
15................	1	44·0	....	....	2	46·4	4	43·0	1	41·2	4	42·9
16................	3	43·8	....	....	1	44·7	4	43·2	3	45·3	1	44·1
17................	5	44·4	....	....	3	45·1	5	42·3	....	....	0	....
18................	4	44·6	....	....	2	44·8	3	44·0	....	....	0	....
19................	3	44·3	....	....	3	45·3	8	42·2	....	....	2	42·4
20–59............	66	44·8	17	45·1	55	46·5	98	43·5	27	44·5	....	....
60+............	14	45·6	7	45·1	4	45·2	12	43·8	8	45·0	....	....

APPENDICES

APPENDIX I

Particulars of Island Lake Men

Serial number[1]	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris[2]
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width	
								AGED 20 TO 59 YEARS											
2	21	1685	1808	915	197·0	157·0	146·0	112	123	177	57	39	57	66	36	18	192	88	D
5	45	1776	1866	929	193·0	163·0	149·0	111	131	185	62	43	66	70	38	14	200	93	M
7	26	1621	1738	869	190·0	156·0	143·0	107	116	177	50	40	58	64	37	17	184	79	D
8	30	1707	1854	891	193·0	144·0	142·0	101	125	183	57	42	65	64	35	11	205	89	D
9	34	1721	1847	917	196·0	157·0	151·0	107	126	199	61	42	62	66	37	14	201	93	D
10	30	1583	1732	861	182·0	145·0	140·0	96	121	179	59	38	53	67	38	15	188	86	D
15	45	1683	1878	911	198·0	153·0	151·0	104	105	188	64	40	68	67	40	17	200	82	D
16	45	1672	1796	854	185·0	157·0	149·0	95	117	178	56	42	60	72	41	12	185	86	D
17	42	1657	1765	876	202·0	163·0	149·0	106	121	190	51	44	64	67	33	16	194	90	D
18	35	1657	1822	860	193·0	163·0	144·0	105	121	175	51	41	56	62	36	17	187	91	D
20	42	1648	1776	878	198·0	161·0	153·0	107	123	191	55	42	59	71	36	16	187	87	D
23	35	1714	1807	887	197·0	155·0	142·0	100	125	179	55	42	58	69	37	14	192	87	D
24	26	1736	1817	897	190·0	153·0	144·0	106	122	185	52	40	60	71	37	13	192	91	D
29	45	1764	1892	930	194·0	158·0	157·0	108	135	201	61	47	64	70	34	16	203	90	D
30	40	1736	1837	895	201·0	158·0	144·0	107	132	190	52	43	61	70	37	19	201	90	D
32	35	1848	1912	952	207·0	162·0	149·0	113	118	188	55	43	58	66	36	17	198	88	Bl-D
33	50	1723	1825	917	205·0	151·0	145·5	103	119	179	51	45	64	73	38	11	199	86	D-M
34	26	1746	1802	942	194·0	159·0	150·0	108	123	188	55	40	57	65	37	15	190	87	D-M
35	28	1681	1772	902	204·0	161·0	151·0	—	122	181	51	41	63	68	39	15	192	91	D-M
36	26	1739	1852	895	195·0	156·0	144·0	102	133	190	58	42	59	66	35	19	191	86	D
37	21	1777	1817	910	183·0	153·0	142·0	100	112	168	52	36	54	63	35	14	195	84	D
38	42	1679	1797	910	203·0	166·0	157·0	110	126	197	58	41	60	64	35	17	199	91	Gr
40	30	1703	1764	904	196·0	152·0	146·0	107	122	176	54	40	58	66	33	22	191	85	D-M
43	24	1759	—	965	201·0	164·0	154·0	105	128	193	57	37	55	73	41	18	—	—	M
45	24	1742	1897	903	201·0	154·0	147·0	103	122	181	55	41	54	72	37	19	195	87	M
47	31	1790	1855	930	194·0	154·0	147·0	99	127	189	57	39	56	70	39	15	202	89	Bl-D
48	28	1642	1720	870	195·0	163·0	149·0	104	128	190	51	40	55	68	35	21	179	84	D
49	32	1688	1793	883	185·0	149·0	143·0	100	119	179	49	40	56	65	35	16	192	84	D-M
50	30	1632	1737	871	192·0	153·0	145·5	98	122	180	54	42	62	60	32	18	184	80	M
51	28	1737	1825	905	197·0	151·0	141·5	101	124	182	55	41	60	71	37	10	191	84	D-M
52	24	1678	1789	913	193·0	160·0	148·0	101	127	189	52	40	51	69	36	15	194	83	Bl-D
53	40	1605	1720	875	189·0	150·0	143·0	96	125	182	60	38	57	68	35	13	184	80	M
56	36	1652	1777	841	195·0	158·0	148·0	102	132	186	54	41	65	65	41	20	189	85	D
59	35	1679	1817	896	196·5	157·0	148·0	104	126	190	52	40	65	65	36	13	199	88	—
60	40	1698	1822	908	192·0	157·0	151·0	103	132	190	63	39	63	64	35	17	196	86	D-M
63	50	1742	1847	926	191·0	157·0	151·0	104	126	186	52	40	60	70	36	21	196	90	M
65	21	1706	1829	900	195·0	165·0	153·0	106	126	193	56	39	57	65	36	16	194	88	M
66	23	1717	1837	887	205·0	160·0	153·0	116	133	187	55	37	58	60	33	23	197	89	M
67	21	1686	1807	904	197·0	153·0	143·0	107	127	174	54	36	59	61	34	19	197	89	D
68	26	1732	1818	940	201·0	155·0	151·0	105	125	176	50	38	63	65	34	22	191	87	D
69	26	1743	1967	913	192·0	154·0	145·5	106	116	176	54	37	61	61	35	15	208	88	D-M
70	34	1726	1822	940	210·0	163·5	153·0	108	126	194	54	40	65	69	35	18	194	86	D-M
73	55	—	—	—	199·0	158·0	153·5	109	124	192	56	41	68	73	36	20	187	83	D-M
75	35	1666	1804	888	204·0	155·0	148·0	103	132	197	52	37	59	63	34	19	197	85	D
76	28	1752	1824	949	207·0	154·5	148·5	113	126	183	50	40	63	66	31	15	194	87	D

APPENDIX I *(Continued)*

Particulars of Island Lake Men (Continued)

Serial number[1]	Age	Stature	Arm reach	Sitting height	Head Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Nose Height	Width	Mouth (length)	Ear Length	Width	Upper lip (length)	Hand Length	Width	Colour of iris[2]

AGED 20 TO 59 YEARS—*Continued*

78	20	1635	1686	864	199·0	155·0	143·5	106	115	172	47	39	60	61	37	16	176	83	D
80	50	1558	1727	846	191·0	156·0	148·0	103	119	181	53	37	57	62	33	18	181	84	D-M
81	20	1689	1827	864	178·0	151·5	141·5	98	129	188	57	37	54	60	33	16	189	87	D
83	28	1721	1814	933	210·0	161·0	153·5	116	127	186	53	41	72	56	32	18	194	93	D
84	50	—	—	—	185·0	149·0	145·5	108	135	199	58	36	67	73	34	18	192	92	D-M
85	40	—	—	—	194·0	162·5	153·0	107	139	197	60	43	65	66	32	17	207	92	M
87	25	1730	1818	891	190·0	147·0	140·5	97	123	177	52	42	59	62	32	17	195	85	D-M
90	42	—	—	—	193·5	155·5	144·0	103	123	194	53	41	61	62	34	17	189	85	D
91	40	1682	1787	905	198·0	156·0	149·0	105	125	177	57	39	68	69	36	19	182	87	D
92	24	1795	1897	933	194·5	156·0	144·0	109	125	178	54	43	62	61	35	19	209	86	D-M
93	45	1686	1857	887	207·5	154·0	146·0	107	120	182	52	39	64	72	33	15	188	85	—
94	24	—	—	—	202·0	152·0	142·5	107	110	173	47	37	59	62	32	16	184	86	M
95	48	1689	1765	879	197·0	156·5	148·0	102	126	184	60	42	67	69	37	10	179	84	M
96	26	1694	1797	882	198·0	147·5	143·0	101	128	184	60	36	59	69	34	15	184	79	D-M
97	24	1713	1844	917	193·0	155·0	145·0	105	127	191	55	39	61	61	35	16	189	84	D-M
99	30	1730	1852	923	199·5	158·0	147·5	103	132	197	61	38	61	61	33	15	200	87	D
104	26	1719	1823	924	204·0	152·5	141·0	101	137	187	56	39	65	66	35	15	199	86	M
105	34	—	—	—	187·0	144·0	138·0	92	131	172	59	38	62	68	34	20	192	77	M-L
106	23	1569	1702	854	192·0	149·5	139·5	107	120	168	48	36	53	51	30	9	185	83	D
107	28	1749	1756	925	205·0	157·0	145·0	106	124	186	55	38	61	68	37	18	197	86	D
108	26	1681	1734	907	199·0	158·0	147·5	110	119	179	61	38	63	63	35	17	188	85	D
109	32	1544	1703	824	189·0	148·0	144·5	101	128	190	58	40	63	67	32	18	186	81	D
110	26	1680	1828	873	196·0	154·0	142·0	110	118	169	52	39	60	—	—	19	—	—	D

AGED 60 YEARS AND OVER

4	60	1705	1857	867	192·0	157·0	150·0	106	121	186	57	43	60	71	41	20	200	89	D
21	60	—	—	—	198·0	158·0	155·0	105	120	176	57	43	55	—	—	19	193	94	M-L
25	60	1653	1752	868	194·0	164·0	152·0	102	145	204	65	35	56	71	40	20	187	89	D
26	65	1601	1727	809	198·0	162·0	153·0	108	133	185	57	41	59	69	33	19	191	86	D
31	60	1592	1687	881	191·0	155·0	143·0	102	128	186	61	40	54	69	35	19	173	83	D
39	70	1700	1772	—	208·0	163·0	156·0	102	135	193	57	42	58	73	40	23	201	91	D-M
46	70	—	—	—	196·0	150·0	149·0	103	116	191	52	36	—	75	38	—	181	82	D-M
57	65	1598	1712	875	195·0	159·0	146·0	106	126	192	55	39	55	67	35	—	188	83	Bl-D
62	60	1625	1757	860	207·0	151·0	147·0	105	123	179	54	44	55	67	35	20	191	85	D
64	60	—	—	—	186·0	155·0	144·0	99	124	182	57	38	56	64	33	16	199	82	D
71	65	1744	1872	913	201·0	154·0	150·0	102	133	197	63	41	62	67	34	22	193	86	D
74	60	1708	1842	880	200·0	159·5	151·0	105	133	179	57	37	64	66	35	24	203	90	D-M
77	60	—	—	—	194·0	156·0	147·0	100	127	178	59	40	61	66	32	18	192	90	
86	60	1658	1742	875	188·0	155·5	149·0	107	123	182	56	40	64	69	34	18	182	91	D-M

[1]Serial Nos. 15–55 inclusive were measured at Smooth Rock, where the Saulteaux dialect was spoken. All others, men and old men, spoke the mixed dialect.

[2]Colour of iris: Bl. = black; D=dark brown; M=medium brown; L=light brown; Gr=grey.

APPENDIX II

Particulars of Gods Lake Men[1]

Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris	
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width		
					AGED 20 TO 59 YEARS															
1	35	1689	1837	913	198·0	151·0	145·5	108	126	185	55	39	59	62	33	19	190	85	D-M	T
3	30	1773	1889	921	193·0	152·5	141·0	108	134	197	62	30	62	71	34	14	199	87	D-M	G
4	40	—	—	—	202·0	151·5	151·5	108	129	171	57	43	64	69	36	18	188	87	D	G
8	50	1709	1790	828	191·0	148·0	148·0	103	120	186	52	41	62	67	32	18	193	88	D	P
9	30	1756	1822	924	201·0	152·0	137·0	104	127	189	56	34	60	69	35	17	192	80	D-M	G
12	28	1682	1777	916	186·0	148·0	138·0	102	122	178	53	38	61	68	35	17	184	83	D	P
13	50	1754	1872	902	197·0	154·0	150·0	103	126	188	57	44	65	62	33	16	196	91	D-M	G
14	45	1705	1875	909	203·0	153·5	148·0	104	131	195	59	43	72	64	39	22	204	87	D	G
15	45	1782	1861	953	192·0	155·0	144·0	108	133	197	59	38	62	69	38	19	194	89	......	P
16	30	1696	1807	900	190·0	153·0	139·0	105	131	193	55	36	55	63	32	18	189	84	D	P
17	50	1682	1765	834	190·5	160·5	150·0	101	124	188	52	40	62	64	34	21	187	89	L	T[2]
18	40	1754	1877	930	195·0	154·0	151·0	114	137	191	57	41	65	73	35	21	203	89	D-M	P
20	27	1670	1750	885	192·5	158·0	149·0	107	123	177	53	34	59	64	35	18	179	85	D-M	T
21	21	—	—	—	194·5	153·5	144·0	105·5	126	190	55	38	62	62	31	16	195	86	D-M	?
22	45	—	—	—	203·0	164·5	156·0	114	122	189	49	39	64	65	37	19	198	92	D	?
23	20	—	—	—	203·0	154·5	145·5	111	127	187	53	36	54	57	35	17	198	93	D	?
24	22	—	—	—	184·5	153·5	135·5	107	120	174	53	38	60	61	33	14	183	86	D	?
					AGED 60 YEARS AND OVER															
2	65	1748	1883	879	194·0	154·0	149·0	107	122	175	56	41	71	75	39	12	209	89	M	G
5	60	—	—	—	194·0	159·5	148·0	107	125	181	59	48	68	73	38	18	187	86	D-M	P
6	65	1799	1937	924	207·0	161·0	156·0	102	135	198	58	47	71	79	39	26	220	96	D	T
7	60	1746	1890	905	206·5	158·0	154·0	110	128	197	55	44	85	75	40	20	198	96	Gr	G
10	60	1640	1741	843	201·0	158·5	155·0	102	117	187	49	43	65	75	34	22	183	82	M-L	G[3]
11	60	1743	1822	930	195·5	161·0	151·0	114	131	182	59	42	63	69	32	22	201	93	Gr	G
19	60	1636	1763	865	203·0	158·0	146·0	107	121	189	53	41	69	65	37	21	184	81	M	G

[1] T indicates an immigrant from Trout lake.
P   "   "   "   Pipikwachoos.
G indicates native to Gods lake.

[2] Father white; mother breed.

[3] Children have hazel eyes.

APPENDIX III

Particulars of Oxford House Men

Serial number	Age	Stature	Arm reach	Sitting height	Head Glabella ad maximum	Head Biparietal maximum	Head Bizygomatic maximum	Head Frontal minimum	Head Menton-nasion	Head Menton-crinion	Nose Height	Nose Width	Mouth (length)	Ear Length	Ear Width	Upper lip (length)	Hand Length	Hand Width	Colour of iris
							AGED 20 TO 59 YEARS												
1..	50	1715	1878	858	198·5	156·0	153·0	104·0	129	192	56	42	62	71	36	20	204	91	D-M
2..	45	1700	1818	864	190·5	147·0	153·5	101·0	119	179	56	40	63	74	39	21	187	91	L
4..	35	1616	1755	845	198·0	146·0	141·0	101·0	123	181	52	37	58	63	31	21	187	86	L
5..	25	1757	1833	857	208·5	137·0	137·0	105·5	118	182	53	37	60	60	39	17	193	91	M
6..	50	1762	1857	900	202·0	143·0	138·0	102·0	127	177	51	39	58	73	32	15	187	92	L
7..	21	1762	1894	906	195·0	149·0	148·0	106·0	120	185	58	39	58	66	37	16	204	93	M-L
8..	25	1853	1885	919	206·0	152·0	146·0	108·0	129	188	54	41	60	63	34	17	201	91	M-L
9..	55	1672	1810	867	201·5	155·5	151·5	102·0	123	179	55	45	64	75	37	20	190	96	M-L
10..	35	1789	1870	922	191·0	154·0	148·5	101·0	130	193	61	42	68	69	38	16	194	87	D-M
11..	45	1777	1880	923	208·0	154·0	145·5	108·0	142	204	59	37	55	73	33	23	200	91	M-L
12..	25	1712	1829	876	205·0	157·0	145·0	111·0	121	188	49	34	58	75	36	14	195	90	D-M
14..	28	1776	1875	905	198·0	155·0	147·0	102·0	109	176	55	39	65	70	35	13	196	94	Gr
15..	50	1664	1793	871	194·0	149·5	139·0	107·0	124	188	53	41	61	70	36	17	191	89	M-L
16..	26	1664	1727	858	189·0	147·0	140·0	104·0	126	177	53	38	60	61	32	19	184	81	D-M
17..	45	1716	1761	902	196·0	157·0	155·5	106·0	129	199	56	35	60	71	40	....	185	90	Gr
18..	45	1667	1788	887	193·0	157·5	141·0	103·0	122	197	52	43	60	72	34	19	188	97	Gr
19..	25	1694	1918	836	194·0	138·5	140·5	95·0	111	174	54	41	62	68	35	12	202	90	Gr
20..	26	1717	1804	907	198·5	156·5	144·0	112·0	122	178	55	36	60	63	36	18	187	84	Gr
21..	40	....	....	....	209·0	151·5	149·0	107·0	128	202	57	40	60	69	33	18	198	95	D-M
23..	40	1793	1889	900	206·0	154·5	145·5	101·0	121	176	55	40	62	66	34	....	194	91	L
24..	26	1749	1849	900	195·0	148·5	144·5	105·0	133	193	59	38	60	67	35	13	186	91	L
25..	28	1773	1863	913	194·0	148·0	140·0	102·0	119	180	56	36	55	67	35	16	197	90	D-M
26..	21	1753	1807	906	193·0	155·0	145·5	104·0	122	182	53	37	58	64	36	14	195	91	Bl
27..	42	....	....	877	193·5	155·5	153·0	104·0	117	179	50	38	60	71	35	21	194	90	L
28..	24	1698	1778	877	196·0	150·5	139·0	100·0	125	197	54	36	52	65	31	13	192	93	D
29..	29	1704	1850	884	192·0	150·5	139·0	99·0	119	182	55	35	61	60	36	14	190	87	D
30..	..	1734	1859	878	195·5	154·0	145·5	112·0	120	179	54	41	65	64	37	14	200	93	D
31..	34	1783	1913	875	195·0	153·5	151·0	111·0	130	197	59	36	62	72	36	16	201	92	D-M
32..	40	1704	1848	871	189·0	153·0	149·5	109·0	120	181	53	37	63	71	39	20	193	91	M
33..	48	1745	1834	930	204·0	153·0	143·0	110·0	118	190	53	38	60	66	36	17	195	95	M
34..	30	1821	1939	934	199·0	153·0	143·0	108·0	132	193	59	41	65	67	35	19	197	89	D-M
35..	35	1720	1857	888	190·5	151·5	144·0	112·0	128	203	57	40	58	66	38	19	190	85	D
36..	45	1612	1713	843	191·5	155·0	140·5	105·0	126	193	58	37	54	73	33	....	179	88	Gr
38..	32	....	....	....	191·0	151·5	143·5	101·0	127	190	61	38	56	66	32	17	192	86	M
39..	38	....	....	....	194·0	147·5	146·5	97·0	124	180	..	..	63	65	34	17	198	97	D
40..	28	....	....	....	193·0	148·5	139·0	103·0	118	185	53	38	61	64	35	15	187	89	D-M
41..	28	....	....	....	205·5	153·0	150·0	109·0	120	170	53	42	56	69	37	17	200	89	D-M
42..	28	....	....	....	197·0	144·0	136·0	105·0	131	196	52	38	64	68	37	19	211	91	D-M
43..	28	....	....	....	191·0	148·0	147·0	104·0	123	194	50	39	58	69	36	19	193	88	Gr
45..	32	....	....	....	202·0	159·5	155·0	113·0	119	177	53	40	64	70	35	16	193	92	D

APPENDIX III *(Continued)*

Particulars of Oxford House Men (Continued)

AGED 20 TO 59 YEARS—*Continued*

Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width	
47..	21	....	....	....	182·0	150·5	142·0	106·0	113	164	49	35	60	67	36	14	178	85	M
48..	32	....	....	....	189·0	151·0	151·0	105·0	124	185	56	44	66	73	40	18	195	90	M
49..	21	....	....	....	196·0	155·0	143·5	105·0	122	187	50	34	57	64	35	16	193	84	D
50..	20	....	....	....	190·0	139·0	132·0	98·0	121	169	49	34	52	60	34	16	184	87	D
52..	..	....	....	....	194·0	145·0	143·0	95·0	119	181	52	43	62	66	31	18	188	86	D-M
53..	..	....	....	....	196·0	150·0	141·5	98·0	126	182	58	38	58	68	33	15	195	85	D
54..	50	....	....	....	192·0	148·5	143·0	102·0	128	184	51	37	56	75	39	15	184	85	M-L
55..	20	....	....	....	197·0	151·0	137·5	104·0	117	182	44	41	61	65	35	19	194	87	M
56..	26	....	....	....	196·0	144·0	148·0	98·0	123	189	53	40	57	68	34	16	191	91	M
57..	30	....	....	....	189·5	146·5	137·5	107·0	112	184	46	36	61	64	35	16	192	84	M-L
59..	30	....	....	....	195·0	151·0	142·0	110·0	132	203	58	35	60	70	37	17	197	91	M
60..	40	....	....	....	198·0	149·0	147·5	110·0	122	178	57	43	60	70	35	17	195	90	D
61..	40	....	....	....	196·5	160·5	151·5	107·0	121	182	55	35	62	73	35	19	183	86	M
62..	45	....	....	....	195·0	152·0	144·5	107·0	122	178	53	40	60	66	38	16	191	93	D
63..	21	....	....	....	190·5	146·0	135·0	103·0	117	167	50	39	56	61	29	15	187	84	D

AGED 60 YEARS AND OVER

Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width	Colour of iris
3..	65	1589	....	804	196·0	155·0	145·5	104·0	124	186	54	42	62	70	36	18	189	85	?
13..	60	1692	1786	906	198·5	159·0	148·5	108·0	123	189	60	38	62	67	35	17	185	87	D-M
22..	70	....	....	....	189·5	155·5	149·5	112·0	128	183	58	38	62	71	38	22	202	91	D-M
44..	60	....	....	....	198·0	159·0	149·5	107·0	129	190	54	40	68	69	37	19	208	91	Gr

Appendix IV

Particulars of Island Lake Women[1]

Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Nose Height	Nose Width	Mouth (length)	Ear Length	Ear Width	Upper lip (length)	Hand Length	Hand Width	Colour of iris
							Head				Nose			Ear			Hand		
									AGED 20 TO 59 YEARS										
3..	40	1618	1723	826	198·0	157·0	146·0	105·0	124	183	....	....	62	....	....	....	....	....	D
8..	25	1593	1732	841	191·0	154·0	145·0	106·0	118	177	48	37·0	52	....	....	....	195	84	D
9..	30	1688	1722	843	182·0	143·0	136·0	98·0	116	173	55	38·0	58	58	34	....	182	73	D
10..	50	1526	1617	790	188·0	157·0	141·0	102·0	123	189	54	35·0	55	59	35	....	175	71	D-M
12..	55	1591	1712	822	193·5	156·0	146·0	107·0	119	181	50	36·0	60	63	31	....	185	80	....
14..	32	1607	1719	858	199·0	152·0	143·0	110·0	112	173	48	37·0	56	58	35	....	181	82	D
16..	40	1505	1632	793	188·0	144·0	137·0	101·0	118	167	53	33·0	54	54	35	....	....	....	Bl
17..	34	1625	1657	871	191·0	145·0	138·0	103·0	127	177	56	36·0	60	59	33	....	179	75	Bl
18..	30	1563	1622	....	184·0	145·0	137·0	95·0	124	177	53	40·5	52	63	37	....	180	77	D
19..	25	1603	1637	834	190·0	153·5	136·0	99·0	117	168	50	40·0	52	....	....	....	176	74	Bl
20..	35	1589	1730	829	190·0	149·0	135·0	98·0	114	169	52	33·0	53	....	....	....	188	75	D-M
21..	40	1543	1627	825	194·0	152·5	140·0	105·0	112	168	50	37·0	58	58	32	....	169	81	Bl
23..	30	1508	1667	2	181·5	149·5	135·5	103·0	114	178	52	34·0	59	....	....	....	175	73	M
24..	35	1561	1652	2	190·0	151·0	138·5	102·0	122	185	52	40·0	56	....	....	....	179	79	Bl
26..	28	1622	1692	832	197·0	151·0	137·0	96·0	124	186	54	40·0	56	....	....	....	177	72	....
27..	35	1649	1704	831	186·0	154·0	138·0	100·0	115	156	51	35·0	52	60	36	....	184	80	D-M
28..	30	1535	1602	831	188·0	149·0	139·0	104·0	116	176	52	34·0	56	64	35	....	174	70	M
29..	28	1493	1542	3	184·5	145·0	133·0	103·0	115	165	47	36·0	51	....	....	....	165	75	D
30..	30	1575	1677	....	186·0	149·0	139·0	97·0	119	181	52	33·0	55	62	37	....	176	81	Bl
31..	26	1585	1677	....	191·0	151·0	144·0	105·0	117	174	51	38·0	55	64	37	188	188	78	D
32..	45	1555	1662	....	185·0	152·0	141·0	101·0	126	184	57	34·0	54	59	36	....	168	78	D-M
34..	45	1534	1617	....	186·0	154·5	144·0	105·0	109	173	52	38·0	57	59	34	....	174	76	D-M
35..	26	1595	1625	....	194·0	150·5	138·0	105·0	120	178	50	37·0	55	64	37	....	182	74	D
38..	24	1506	1604	....	179·5	150·0	136·0	97·0	118	165	50	35·0	51	54	35	....	175	80	D
39..	32	1601	1707	....	176·0	146·0	137·0	98·0	124	181	56	34·0	57	60	36	....	176	78	Bl
40..	28	1659	1752	....	194·0	151·0	142·0	105·0	123	168	56	37·0	58	67	34	....	196	83	Bl
41..	28	1559	1677	....	190·0	156·0	139·0	98·0	116	176	54	36·0	54	59	34	....	178	78	Bl
43..	45	1594	1627	....	194·0	149·0	145·0	101·0	124	173	52	37·0	61	63	31	....	179	83	D
44..	22	1556	1672	....	191·0	150·0	137·5	106·0	117	177	48	37·0	57	60	35	....	183	82	D-M
46..	30	1587	1632	....	178·0	149·0	138·0	101·0	114	175	46	33·0	50	57	37	....	185	77	D
48..	20	1606	1696	....	186·0	148·0	140·0	110·0	113	169	46	39·0	51	61	34	....	179	81	Bl
49..	45	1650	1710	....	197·0	157·0	140·0	106·0	118	170	50	40·0	61	64	34	....	186	80	Bl
52..	24	1552	1622	....	190·0	150·0	136·0	106·0	106	165	47	32·5	49	58	36	....	185	79	Bl
54..	40	1520	1619	792	185·0	149·0	140·0	98·0	113	169	52	35·0	60	60	33	17	176	76	D
55..	26	1567	1564	843	179·0	149·5	141·0	103·0	117	173	50	31·0	50	55	31	19	168	73	Bl .
56..	26	1595	....	858	181·0	155·0	144·0	104·0	124	172	55	35·0	50	60	32	16	176	80	D
58..	40	1468	1570	788	181·0	151·0	134·0	95·0	113	174	45	33·0	54	54	32	17	175	75	Bl
59..	25	1529	1626	814	191·0	148·0	134·0	103·0	115	174	47	35·0	52	57	35	15	177	73	D-M
61..	35	1507	....	767	183·0	142·0	134·0	99·0	111	165	47	36·0	55	57	32	15	174	78	D
63..	32	1546	1657	808	187·0	153·5	143·0	113·0	121	173	51	40·0	55	63	36	16	177	78	Bl

[1] The women and old women whose serial numbers fall between 6 and 53 inclusive were measured at Smooth Rock, where the Saulteaux dialect was spoken. The remainder spoke mixed Saulteaux and Cree.

[2] Cannot straighten.

[3] Fat, not taken.

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Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width	
							AGED 20 TO 59 YEARS—*Continued*												
65..	24	1606	1672	845	193·0	151·0	142·0	108·0	118	185	50	36·0	54	64	36	18	182	77	D
67..	..	1596	1662	836	191·0	157·0	142·0	107·0	122	187	50	34·0	52	53	35	19	173	80	D
68..	20	1609	1690	852	186·0	147·5	137·0	104·0	122	181	49	32·0	54	55	34	19	182	80	Bl
69..	32	1636	1735	875	195·0	145·0	134·0	102·0	126	191	54	35·0	57	54	30	19	190	79	Bl
70..	36	1701	1840	871	185·0	149·5	144·5	105·0	116	175	52	34·0	57	59	33	17	202	78	Bl
72..	45	1649	1725	838	189·0	148·0	142·0	107·0	119	177	53	36·0	61	64	33	16	190	79	D
73..	28	1552	1687	801	191·0	149·5	139·0	109·0	123	185	54	38·0	38	60	34	17	180	78	D-M
74..	45	1496	1587	815	191·0	153·0	143·0	99·0	127	184	51	36·0	59	57	32	21	175	82	D-M
76..	30	1576	1712	852	188·0	149·5	140·0	100·0	118	168	47	34·0	54	57	36	21	183	86	D-M
77..	30	1601	1679	827	191·0	154·0	149·0	112·0	117	189	47	33·0	58	59	32	17	187	80	Bl
78..	35	1557	1617	845	174·0	153·5	141·0	98·0	123	184	52	35·0	56	60	37	18	182	79	D-M
79..	36	1578	1637	852	178·0	152·5	140·5	99·0	119	178	50	33·0	58	58	37	17	176	75	D
80..	38	1583	1657	825	190·0	152·0	143·0	104·0	116	175	50	36·0	38	57	35	18	177	81	D
81..	25	1586	1752	820	198·0	151·5	147·5	110·0	129	191	49	37·0	62	61	34	22	185	80	D-M
82..	28	1597	1657	854	185·0	145·0	136·5	95·0	121	182	54	34·0	52	61	32	14	184	78	D-M
83..	20	1594	1652	865	187·0	152·0	145·0	105·0	107	167	45	35·0	56	56	32	16	178	79	D
84..	21	1591	1702	830	187·5	144·0	136·0	98·0	119	168	49	36·0	58	53	34	18	190	84	D-M
86..	42	1592	1697	....	185·0	147·5	139·5	101·0	117	172	51	30·0	52	56	33	19	172	77	D
87..	..	1499	1572	....	177·0	146·0	139·0	99·0	113	170	43	32·0	50	59	31	15	166	75	D-M
88..	55	1627	....	....	199·0	154·0	141·0	103·0	118	176	57	36·0	57	55	35	17	192	80	D-M
89..	20	1626	1657	888	187·0	153·0	145·0	107·0	118	174	47	32·0	53	54	31	19	178	83	D
91..	42	1537	1634	826	185·0	155·0	141·5	104·0	113	169	51	36·0	62	62	37	17	180	76	D
92..	32	1548	1654	842	186·0	146·5	141·0	107·0	119	177	51	36·0	57	57	32	16	183	80	D-M
93..	..	1477	1577	796	192·0	150·0	137·0	101·0	114	177	48	32·0	56	57	33	15	174	76	D-M
94..	51	1485	1612	767	196·0	146·0	137·5	102·0	121	169	51	36·0	52	63	32	22	181	80	D
96..	48	1512	1584	794	181·0	148·0	139·0	100·0	113	164	49	34·0	54	60	34	15	175	75	D-M
97..	..	1545	1656	823	198·0	152·0	141·0	104·0	119	185	48	36·0	53	54	32	14	178	78	D
98..	36	1550	1672	816	187·0	148·5	141·0	103·0	115	176	46	36·0	58	57	30	14	188	79	D
99..	35	1488	1559	802	188·0	146·0	139·0	105·0	112	167	47	36·0	49	55	32	18	169	79	D
100.	35	1502	....	806	191·0	153·0	146·0	106·0	116	157	47	37·0	56	60	30	21	181	78	D
102.	28	1599	1772	833	188·0	152·0	146·0	102·0	127	183	57	37·0	61	62	32	15	188	89	D-M
103.	23	1502	1632	777	188·0	149·0	133·0	101·0	124	187	54	34·0	51	34	34	15	186	75	D-M
104.	..	1562	1663	822	181·0	154·0	139·0	99·0	117	182	51	31·0	51	58	34	16	187	81	D
105.	50	1551	1702	819	198·0	153·5	146·5	107·0	124	177	52	37·0	59	61	36	21	182	78	D-M
106.	30	1544	1677	834	198·0	156·0	144·5	102·0	124	171	49	36·0	54	58	36	21	184	81	Bl
108.	26	1639	1684	862	196·5	158·0	144·0	105·0	126	182	49	35·0	57	60	33	19	184	83	Bl
109.	24	1666	1787	844	185·5	148·0	136·0	104·0	111	166	46	32·0	57	57	35	12	189	72	D-M
110.	30	1623	1662	870	183·0	156·0	144·0	98·0	124	186	53	36·0	56	60	35	17	181	78	M
111.	30	1573	1628	847	186·0	149·0	138·0	104·0	121	177	48	33·0	55	59	33	20	178	75	D
112.	30	1713	1772	881	190·0	150·0	139·0	102·0	124	185	54	36·0	58	61	33	13	189	76	D-M
114.	50	1550	1647	815	189·0	146·0	142·0	101·0	115	163	47	35·0	58	65	32	21	182	79	Bl
115.	..	1557	1687	821	195·0	151·5	144·0	105·0	114	174	49	37·0	62	64	34	19	175	80	D-M
116.	55	1598	1672	831	195·0	154·5	145·5	109·0	114	167	46	40·0	70	60	32	19	175	80	D-M
117.	36	1643	1742	863	199·0	151·5	145·0	111·0	127	180	52	44·0	60	55	31	19	186	80	D-M
118.	50	1568	1624	840	190·0	155·5	141·5	101·0	120	178	56	34·0	55	56	35	19	171	76	D

Appendix IV *(Continued)*

Particulars of Island Lake Women (Continued)

AGED 20 TO 59 YEARS—Continued

Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width	
119.	28	1608	1687	875	192·0	150·5	146·5	105·0	118	178	48	35·0	57	57	31	18	177	83	D
121.	45	1516	1637	800	182·0	148·0	138·0	101·0	114	178	50	35·0	58	65	38	14	181	74	D
122.	30	1594	1717	836	186·0	153·5	144·0	104·0	126	197	50	36·0	57	58	30	19	184	80	D
124.	26	1617	1615	846	190·0	146·0	135·5	100·0	125	181	52	35·0	55	56	35	17	179	71	Bl
125.	40	1512	1602	828	196·0	154·0	140·5	107·0	114	176	48	34·0	60	56	34	22	171	79	D-M
126.	30	1610	1687	838	187·0	152·0	143·5	103·0	122	178	56	35	66	57	31	16	182	80	D-M
127.	35	1471	1543	784	183·0	144·0	134·5	99·0	118	174	49	34	57	59	33	18	171	73	D-M
128.	55	1520	1612	793	186·0	148·5	140·5	97·0	118	170	47	34	63	60	34	21	172	78	D-M
129.	35	1607	1670	836	189·0	148·0	133·5	94·0	118	184	31	33	60	60	36	11	176	75	D
130.	30	1587	1682	820	174·0	148·0	137·5	97·0	122	168	54	31	54	54	32	18	182	79	D-M
132.	24	1664	1752	885	190·0	147·0	140·5	103·0	126	182	53	34	53	60	35	14	185	86	D-M
133.	34	1634	1767	855	192·0	150·0	140·5	103·0	122	177	54	39	60	61	36	15	179	81	D-M
134.	28	1609	1722	835	197·0	150·0	142·0	102·0	119	177	51	30	58	57	31	15	181	76	D
138.	40	1610	1702	869	189·0	154·0	146·0	101·0	121	191	53	37	58	67	35	19	182	80	D
139.	21	1538	1627	858	183·5	148·5	137·5	104·0	114	179	46	31	55	57	34	13	176	76	D

AGED 60 YEARS AND OVER

Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand		Colour of iris
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width	
2.	65	1639	1571	838	187·0	153·0	143·0	98·0	122	180	..	..	53	....	....	....	....	....	....
6.	60	1594	1672	852	195·0	154·0	146·0	100·0	108	182	47	35	52	68	41	....	179	77	D
7.	65	1567	1714	824	191·0	158·0	145·0	105·0	122	194	56	39	54	67	36	....	191	75	D
15.	60	1659	1727	852	192·0	148·0	142·0	103·0	117	171	50	42	62	....	....	....	190	85	D
22.	60	1581	1647	....	192·0	151·0	142·0	101·0	124	175	54	36	58	56	33	....	174	74	D
33.		....	....	....	188·0	149·0	133·5	99·0	121	160	53	38	51	66	37	....	....	....	M
42.		1548	1662	....	191·0	154·0	143·5	101·0	118	....	51	32	53	65	33	....	177	80	Bl
53.		....	....	....	188·0	157·0	138·0	104·0	117	167	53	37	58	64	33	....	167	75	Bl
75.	60	1610	1717	867	198·0	150·0	143·0	107·0	124	183	61	36	58	61	36	17	193	81	Bl
85.	65	....	....	....	220·0	152·0	136·0	102·0	118	178	53	35	51	55	34	11	177	78	M
95.	60	....	....	....	195·0	154·0	143·0	105·0	122	170	52	37	58	62	34	19	185	83	D
120.	60	....	....	....	183·0	152·0	144·5	101·0	124	196	57	40	61	66	31	18	185	78	D
131.	65	....	....	....	184·0	151·5	142·0	99·0	114	167	49	39	59	70	36	18	165	79	D-M
135.	60	....	....	809	181·0	152·0	143·0	107·0	112	174	49	35	57	59	31	14	182	82	D-M
142.	60	....	....	....	185·0	152·0	137·5	104·0	119	179	55	38	62	60	33	18	....	....	D
143.	65	....	....	....	170·0	151·0	138·0	101·0	112	169	49	37	59	64	33	19	....	....	

APPENDIX V

Particulars of Island Lake Women[1]

Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Nose Height	Nose Width	Mouth (length)	Ear Length	Ear Width	Upper lip (length)	Hand Length	Hand Width	Colour of iris	
AGED 20 TO 59 YEARS																				
1..	25	1611	1673	852	183·0	151·0	138·0	103·0	119	181	52	30	53	60	31	14	177	79	Bl	G
2..	25	1647	1754	866	191·0	158·0	142·5	103·0	130	197	55	30	56	....	....	14	178	77	D	G
3..	28	1626	1702	881	186·0	154·0	141·0	97·0	121	184	52	35	54	....	....	13	181	83	D	G
4..	21	1615	1698	843	184·0	148·0	141·0	100·0	124	186	47	33	56	....	....	21	181	76	Bl	G
5..	21	1599	1677	841	184·0	142·0	135·0	99·0	118	178	48	31	59	....	....	16	181	77	D	G
6..	40	1529	1621	824	189·0	150·0	143·0	105·0	117	167	50	35	60	....	....	19	166	82	D	P
7..	45	1538	1663	821	197·0	149·0	140·0	107·0	118	171	53	34	59	....	....	13	178	82	D	P
8..	55	1547	1688	827	183·0	147·5	133·5	100·0	131	181	54	36	57	....	....	20	175	79	M	T
9..	35	1568	1679	842	191·0	153·0	149·0	105·0	121	177	50	35	61	....	....	20	185	84	D	P
13..	35	1520	1652	795	192·0	149·0	139·0	100·5	119	187	49	36	62	53	32	16	174	80	D-M	T
16..	24	1710	1737	882	192·0	151·0	140·0	111·0	118	175	48	33	58	63	33	19	182	80	D-M	G
17..	35	1525	1649	817	194·0	152·0	142·5	106·0	122	183	51	31	59	60	30	19	180	80	D-M	P
21..	30	1605	1715	892	183·0	146·5	139·0	107·0	119	177	51	38	63	....	....	19	187	77	D	G
22..	35	1605	1687	856	190·0	155·0	144·0	102·0	121	188	50	40	57	61	32	17	179	84	D	G
23..	45	1515	1640	794	184·0	145·5	139·0	99·0	114	168	53	36	66	57	34	19	172	78	D	P
25..	30	1577	1665	818	189·0	144·0	137·5	99·0	121	172	50	36	59	....	....	16	182	81	D-M	G
26..	26	....	....	....	192·5	147·0	138·0	106·0	107	162	42	37	61	....	....	16	176	71	D	P
27..	30	1586	1693	812	186·5	146·5	134·5	105·0	117	169	47	40	55	....	....	17	182	78	D-M	G
28..	38	1545	1690	810	192·0	156·5	148·0	105·0	130	177	56	34	62	....	....	14	176	77	Bl	P
29..	30	1604	1666	843	186·0	149·0	140·0	105·0	117	169	51	37	59	....	....	15	178	85	D-M	G
33..	30	1609	1685	855	189·0	146·0	139·0	102·0	117	165	49	32	57	....	....	17	174	81	D-M	G
35..	...	1494	1594	776	184·0	149·0	140·5	102·0	114	166	47	32	60	....	....	17	173	78	D	T
36..	36	1587	1686	804	182·0	149·0	137·0	102·0	121	185	53	36	59	....	....	14	183	78	D-M	T
37..	30	1562	1656	778	186·5	149·0	137·0	101·0	125	181	51	34	55	....	....	19	182	78	Bl	G
38..	30	....	....	877	195·0	150·5	134·0	108·0	124	186	53	35	52	....	....	18	180	82	D-M	G
39..	30	1664	1760	858	190·0	149·5	143·0	104·0	117	178	50	35	61	....	....	16	182	82	M-L	G
40..	45	1589	1688	....	191·0	153·0	139·0	102·0	119	197	46	34	59	....	....	17	179	80	M	G
AGED 60 YEARS AND OVER																				
10..	60	....	....	....	193·0	154·5	148·5	109·0	109	170	48	47	65	....	35	13	180	82	D	T
11..	60	....	....	823	190·0	154·0	142·0	100·0	122	173	53	40	65	67	35	16	185	84	D-M	G
12..	60	....	....	....	188·0	151·0	139·5	100·0	116	168	51	40	62	71	33	19	183	80	D-M	P
18..	65	1500	1624	789	195·0	158·0	148·0	106·0	128	182	53	37	60	....	....	22	169	80	D	P
24..	65	1632	1745	822	194·0	154·5	150·5	110·0	119	169	51	40	66	....	....	25	181	79	D-M	3
30..	65	1545	1740	822	184·0	151·0	142·0	105·0	118	176	53	34	60	....	....	17	177	82	D	3
31..	65	1565	1669	795	190·0	152·0	135·5	101·0	118	174	52	37	58	....	....	22	....	....	D-M	G
32..	65	1654	1816	853	194·0	153·0	147·5	104·0	122	177	54	40	69	....	....	17	190	83	D-M	G
34..	70	....	....	....	188·5	152·5	140·0	106·0	116	173	53	40	64	....	....	18	184	84	D	P
UNDER 20 YEARS																				
14..	16	1521	1452	788	185·0	147·5	138·0	99·0	116	169	48	36	59	59	35	17	175	77	Bl	
15..	16	1529	1457	815	187·0	147·5	137·5	111·0	109	171	45	35	54	55	34	13	167	77	D	
19..	16	1529	1617	815	180·0	145·0	130·0	99·0	113	166	48	31	56	....	....	13	168	77	D-M	
20..	15	1632	1667	865	193·0	150·0	137·0	111·0	114	157	48	38	55	....	....	19	187	77	D	

[1] T = Immigrant from Trout lake.
P = Immigrant from Pipikwachoos.
G = Native to Gods lake or Hayes river.
[2] York factory.   [3] Oxford House.

APPENDIX VI

Particulars of Island Lake Boys

Serial number	Age	Stature	Arm reach	Sitting height	Head Glabella ad maximum	Head Biparietal maximum	Head Bizygomatic maximum	Head Frontal minimum	Head Menton-nasion	Head Menton-crinion	Nose Height	Nose Width	Mouth (length)	Ear Length	Ear Width	Upper lip (length)	Hand Length	Hand Width
							AGED 10 TO 19 YEARS											
3...	19	1699	1729	917	187·5	157·0	142·5	107·0	120	177	53	38	55	61	40	19	183	82
61...	19	1676	1737	886	187·0	151·0	141·0	103·0	122	182	52	38	56	62	37	20	195	89
102...	19	1668	1770	888	194·0	160·5	144·5	106·0	118	192	48	38	61	63	35	14	182	77
41...	18	1696	1842	908	194·0	149·0	144·0	107·0	124	179	54	38	55	62	36	19	193	88
72...	18	1769	1877	915	197·0	151·5	146·0	108·0	123	183	54	38	64	63	36	21	202	88
82...	18	1622	1677	863	191·0	153·0	136·0	104·0	118	171	....	....	....	....	....	....	183	82
101...	18	1676	1805	875	202·0	154·0	140·0	108·0	129	189	55	38	60	60	35	20	194	86
42...	17	1759	1815	902	198·5	152·0	150·5	103·0	126	185	52	36	54	68	35	20	193	90
54...	17	1671	1783	897	189·0	148·0	145·0	106·0	134	187	54	36	56	68	34	15	191	83
55...	17	1759	1845	959	202·0	152·0	145·0	102·0	132	198	55	41	55	66	35	16	209	91
79...	17	1698	1778	882	187·0	152·5	142·5	102·0	122	187	51	37	56	56	33	17	197	88
103...	17	1613	1674	848	188·0	150·0	136·5	102·0	121	175	49	33	56	55	31	15	177	77
27...	16	1614	1727	838	191·5	150·0	138·0	104·0	116	181	50	38	51	66	39	....	185	84
28...	16	1712	1742	961	188·0	144·0	137·0	102·0	117	177	....	....	....	....	....	....	....	....
88...	16	1438	1543	737	179·0	144·5	133·0	103·0	117	172	51	32	59	60	34	18	167	70
3B.	16	1616	1672	805	189·0	147·5	137·0	105·0	115	164	50	38	57	60	32	....	182	80
98...	15	1582	1663	815	197·5	149·0	135·5	105·0	121	184	52	36	57	60	32	16	182	80
6...	14	1465	1526	751	187·0	150·0	130·0	105·0	107	167	....	....	....	....	....	....	....	....
19...	14	1542	1597	843	187·0	153·0	134·0	104·0	119	177	....	....	....	....	....	....	....	....
22...	14	1479	1567	768	182·0	146·0	132·0	102·0	110	163	....	....	....	....	....	....	....	....
89...	14	1399	1450	728	179·5	151·0	128·0	106·0	108	169	47	29	52	58	34	16	153	68
12B.	14	1469	1525	752	187·0	148·5	133·5	101·0	109	165	....	....	....	....	....	....	....	....
13B.	14	1600	1627	848	191·0	153·5	137·0	108·0	118	171	51	37	53	58	35	15	179	77
44...	13	1437	1487	775	190·5	155·0	135·0	102·0	112	172	47	30	47	....	....	....	....	....
58...	13	1739	1832	903	181·0	148·5	135·0	102·0	122	180	52	37	53	61	36	....	195	79
100...	13	1422	1534	754	175·5	143·0	130·5	100·0	109	168	49	34	55	56	34	15	165	71
2B.	13	1449	1518	755	186·0	148·0	130·0	100·0	108	156	46	30	51	56	34	....	164	68
6B.	13	1414	1479	733	180·5	148·0	131·0	102·0	108	154	46	31	51	53	31	15	157	69
9B.	13	1462	1527	755	187·0	148·5	130·0	100·0	107	159	49	31	56	55	32	12	164	65
10B.	13	1391	1440	730	181·0	150·5	132·5	101·0	109	155	46	31	52	51	31	16	154	66
11B.	13	1393	1460	723	192·0	158·0	141·5	108·0	116	175	48	32	53	56	35	17	160	70
7B.	12	1392	1440	729	183·0	145·0	130·0	100·0	115	164	52	34	53	60	36	15	159	68
8B.	12	1371	1467	715	187·0	154·0	138·0	100·0	112	173	50	32	51	58	35	17	159	68
11...	11	1371	1420	724	172·0	142·0	124·0	....	101	....	....	....	....	....	....	....	....	....
12...	11	1422	1470	754	186·0	145·5	127·0	....	....	....	....	....	....	....	....	....	....	....
13...	10	1368	1446	696	186·0	144·0	130·0	....	....	....	....	....	....	....	....	....	....	....
14...	10	1258	1295	678	184·0	143·0	124·0	....	....	....	....	....	....	....	....	....	....	....
4B.	10	1290	1371	700	186·0	147·0	130·0	99·0	106	164	46	31	50	58	32	....	149	69
5B.	10	1277	1361	666	172·0	151·0	122·0	99·0	108	168	48	29	44	60	35	....	147	60

Appendix VII

Particulars of Oxford House Boys

Serial number	Age	Stature	Arm reach	Sitting height	Head Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Nose Height	Width	Mouth (length)	Ear Length	Width	Upper lip (length)	Hand Length	Width
								AGED 10 TO 19 YEARS										
4...	19	1675	1810	912	187·0	149·0	137·0	95·0	117	176	49	34	56	60	32	16	183	87
51...	19	....	....	....	199·0	147·0	140·5	108·0	127	190	51	39	58	70	38	22	195	90
58...	19	....	....	....	199·0	141·5	139·0	107·0	123	179	49	34	54	64	34	17	206	87
3B.	18	1629	1722	884	185·0	146·0	139·0	101·0	132	186	56	38	64	66	34	14	186	80
7...	18	1615	1789	880	192·0	152·0	140·5	102·0	124	192	50	32	54	58	30	17	180	84
1B.	17	1528	1691	825	184·0	146·0	135·0	100·0	131	184	59	33	57	59	36	12	186	80
13...	17	1549	1680	849	186·5	147·0	135·5	103·0	111	176	50	34	56	62	32	14	189	87
16...	17	1421	1608	754	174·0	132·5	129·5	93·0	107	169	48	34	50	63	32	14	173	80
46...	16	....	....	....	181·0	155·0	141·5	101·0	118	174	52	38	56	62	36	18	190	85
6...	15	1729	1888	952	198·0	154·0	141·5	107·0	129	192	56	36	55	70	34	18	198	94
9...	15	1534	1647	827	190·0	144·0	135·5	103·0	117	179	50	33	54	62	29	17	179	81
5...	14	1404	1570	768	182·0	140·5	130·0	101·0	116	166	48	29	50	62	33	20	167	79
8...	14	1483	1669	809	182·0	145·0	132·0	99·0	116	177	49	33	55	64	34	17	175	78
12...	14	1358	1423	750	181·5	151·0	121·0	100·0	108	162	42	34	46	60	31	18	152	65
14...	13	1447	1577	757	190·0	150·0	137·0	103·0	112	165	47	33	51	65	33	16	157	77
15...	13	1457	1610	768	188·0	150·0	131·5	103·0	113	174	43	32	56	62	38	17	177	76
2...	12	1339	1519	743	181·0	146·5	135·5	106·0	109	160	47	31	57	61	33	18	167	71
10...	11	1324	1426	714	175·0	143·0	125·0	97·0	102	162	44	34	53	72	36	15	146	64
11...	10	1329	1500	716	186·0	146·0	128·0	101·0	102	163	46	31	48	59	36	13	157	66

Appendix VIII

Particulars of Island Lake Girls

Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width
					Head						**Nose**			**Ear**			**Hand**	
AGED 10 TO 19 YEARS																		
11...	19	1498	1582	800	188·0	153·0	138·0	107·0	114	178	47	33	57	60	32	....	167	75
36...	19	1592	1692	....	181·0	148·0	134·0	101·0	107	157	47	36	53	....	....	....	176	73
57...	19	1498	1588	837	170·0	150·0	141·5	99·0	113	177	47	40	56	59	34	17	173	77
60...	19	1533	1700	796	180·0	148·0	142·0	111·0	111	171	46	36	50	58	37	15	187	80
62...	19	1551	1727	821	189·0	148·0	135·5	101·0	131	186	51	35	55	62	35	18	184	75
66...	19	1672	1810	865	187·0	150·5	142·0	111·0	124	199	54	34	55	52	34·5	12	197	78
90...	19	1571	1660	854	190·0	148·0	141·0	104·0	112	169	48	36	59	52	33	20	178	77
107...	19	1577	1662	804	170·0	137·5	127·0	90·0	106	158	51	33	46	54	32	17	178	72
1...	18	1557	....	814	194·5	150·0	130·0	100·0	122	182	....	....	60	....	....	....	....	....
37...	18	1521	....	....	180·0	151·0	132·5	101·0	117	177	49	33	55	....	....	....	....	....
50...	18	1577	1653	....	188·5	145·0	140·0	103·0	121	180	50	36	58	62	32	....	183	78
64...	18	1507	1572	847	182·0	149·5	142·0	104·0	114	177	50	41	53	55	35	14	170	77
141...	18	1540	1593	817	176·0	141·0	131·5	104·0	119	172	52	34	54	62	32	12	175	77
13...	17	1607	1647	830	189·0	152·0	136·0	102·0	118	177	48	35	54	....	....	....	179	77
45...	17	1640	1765	....	193·0	150·0	142·5	108·0	124	186	51	36	52	63	38	....	188	77
113...	17	1608	1672	856	187·0	145·0	138·0	101·0	113	168	52	34	55	51	35	18	175	77
123...	17	1561	1637	827	181·0	141·0	136·0	99·0	119	162	45	37	51	52	31	14	179	74
136...	17	....	....	....	184·0	147·0	135·0	98·0	113	172	45	35	55	58	31	14	187	79
4...	16	1650	1707	870	193·0	153·0	144·0	102·0	115	174	....	....	....	....	....	....	....	....
47...	16	1545	1617	....	185·0	151·0	135·0	102·0	108	163	44	33	52	....	....	....	170	73
71...	16	1647	1779	800	188·5	147·0	137·0	107·0	119	182	53	36	58	65	34	14	198	80
140...	16	1556	1644	848	185·5	153·0	142·0	117·0	118	183	44	39	51	58	31	16	180	84
144...	16	1501	1617	792	181·0	152·0	138·0	105·0	116	172	53	33	47	56	34	15	171	73
101...	15	1508	1589	816	188·5	154·0	140·0	107·0	113	175	44	35	57	56	32	15	176	78
1G.	15	1540	1626	795	184·0	146·0	137·0	101·0	111	167	....	....	51	59	32	....	179	73
2G.	15	1500	1558	763	190·0	147·0	140·0	104·0	107	161	45	35	52	55	33	....	174	74
6G.	15	1511	1766	819	183·0	155·0	145·5	108·0	112	183	47	32	52	57	31	16	188	83
AGED 13 TO 14 YEARS																		
25...	14	1543	1647	814	182·0	144·0	133·0	105·0	111	162	....	....	....	....	....	....	....	....
4G.	14	1407	1477	735	183·0	145·0	132·0	102·0	108	176	46	35	49	56	36	....	156	72
5...	13	1491	1521	788	183·0	144·0	130·0	100·0	108	168	....	....	52	....	....	....	....	....
137...	13	1366	1432	730	184·0	139·0	126·0	101·0	106	161	44	29	45	57	32	14	158	66
5G.	13	1429	1494	729	178·5	142·0	129·0	94·0	100	149	41	33	47	54	33	....	163	70
7G.	13	1543	1617	803	188·0	145·5	137·5	105·0	114	164	47	34	55	57	30	14	184	75

Appendix IX

Particulars of Oxford House Girls

Serial number	Age	Stature	Arm reach	Sitting height	Head						Nose		Mouth (length)	Ear		Upper lip (length)	Hand	
					Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal minimum	Menton-nasion	Menton-crinion	Height	Width		Length	Width		Length	Width
								AGED 10 TO 19 YEARS										
8...	19	1595	1727	891	185·0	150·0	134·5	102·0	123	184	57	32	50	....	....	13	184	80
13...	19	1526	1718	825	184·5	139·5	127·0	100·0	107	162	43	35	55	....	....	15	184	76
14...	16	1403	1554	794	174·0	147·5	127·5	95·0	101	160	43	35	45	....	....	14	161	71
1...	15	1539	1698	810	182·0	148·0	133·0	100·0	109	162	51	34	51	....	....	14	180	76
6...	15	1543	1646	841	190·0	143·5	127·0	102·0	122	186	48	33	50	....	....	19	174	74
7...	15	1561	1657	839	182·0	151·5	133·5	102·0	119	176	46	30	49	....	....	17	171	76
12...	15	1543	1720	826	188·5	141·0	133·0	106·0	112	169	43	34	51	....	....	14	182	77
5...	14	1514	1691	828	185·0	152·0	138·0	107·0	121	187	51	32	49	....	....	12	177	78
11...	14	1472	1602	813	188·0	147·5	132·5	104·0	114	176	44	32	50	....	....	17	176	77
9...	14	1507	1688	805	185·5	147·5	131·0	101·0	119	184	52	33	52	....	....	11	183	75
3...	13	1436	1614	749	184·5	141·5	124·5	101·0	113	162	49	30	48	....	....	15	167	66
4...	13	1477	1626	813	192·0	146·0	132·0	102·0	108	166	41	32	52	....	....	18	180	74
2...	12	1439	1588	786	175·5	141·5	128·0	101·0	101	159	48	31	51	....	....	12	173	76
15...	11	1336	1416	735	176·5	140·0	122·5	96·0	109	162	48	30	52	....	....	13	157	65
16...	10	1300	1446	739	178·0	142·0	122·5	101·0	101	147	41	32	50	....	....	10	156	65

Distribution and Particulars of Carious Teeth

	Serial number	UR M3	UR M2	UR M1	UR Pm2	UR Pm1	UR C	UR I2	UR I1	UL I1	UL I2	UL C	UL Pm1	UL Pm2	UL M1	UL M2	UL M3	LR M3	LR M2	LR M1	LR Pm2	LR Pm1	LR C	LR I2	LR I1	LL I1	LL I2	LL C	LL Pm1	LL Pm2	LL M1	LL M2	LL M3	Number decayed
Island Lake men	9														×																			
	16			×																														
	36																																	
	76																															×			
	78																															×			1
	96																															××			
	97																															×			
	30																															×			2
	83			×																												×			3
	47												×		××					×												×			
	67			××																												×			
	87			××																												×			4
Island Lake old men	71																				×										××			1
	4																															×××			2
	86			××																	×										×			4
	77			××											×																×			5
	46	×	×	××											×																×			
	39	?	?	?											?	?	?	?	?	?											?	?	?	12
Gods Lake men	1			·	×																													
	15																															×			1
	22																			×															
	8																			×	×											×			
	12																			×	××											×	×	×	2
	16																				××											×			
	4								×																										
	18															×			×																3
Gods Lake old men	5	×			×												×			×												×			
	7															×				×															2
	2			×	×											××					×											×			3
	10				×								×			××																	××		4
	19															××	×															×			
	6																		×	×	××				×	×	×	×	×			×			9

Distribution and Particulars of Carious Teeth (Continued)

	Serial number	UPPER TEETH Right M3	M2	M1	Pm2	Pm1	C	I2	I1	Left I1	I2	C	Pm1	Pm2	M1	M2	M3	LOWER TEETH Right M3	M2	M1	Pm2	Pm1	C	I2	I1	Left I1	I2	C	Pm1	Pm2	M1	M2	M3	Number decayed
Oxford House men	1																			×														
	2																			×														
	15								×																									1
	20																																×	
	26					×																												
	31																			×														
	48																															×		
	50																															×		
	63																			×														
	5																			×											×			
	6																	×													×			
	8																														×	×		2
	28																			×											×			
	52																			×											×			
	53																		×	×														
	25																	×															×	
	39												×																		×	×		
	43			×																×											×			3
	47																	×	×												×			
	60	×																×															×	
	16			×																×											×	×		
	17			×											×																×	×		
	24														×				×													×	×	4
	29			×														×	×													×	×	
	41																													×	×	×	×	
	36	×	×															×	×												×			
	38																	×	×												×	×	×	5
	11	×	×																												×	×	×	
	9	×	×					×	×	×	×								×	×											×			7
	54			×		×												×	×	×											×	×	×	8
	34		×	×														×	×	×											×	×	×	
	33		×	×									×					×	×	×											×	×	×	10
	59	×	×	×														×	×	×											×	×	×	
	18	×		×		×				×			×	×	×	×		×	×	×						×					×	×	×	15
Oxford House old men	13																								×									1
	3	×															×	×														×		4
	44																		×	×											×	×	×	5

Gods Lake women ....

8			
13			
16			
21			1
25			
28			
1			
2			
3			2
17			
35			
40			
37			3
38			5

Gods Lake old women ....

34			1
24			
12			2
18			3
10			4
30			

Island Lake women ....

3			
10			
26			
28			
35			
61			
63			
79			
87			
92			1
105			
110			
121			
122			
130			
132			
138			
16			
24			
27			
58			
82			2
88			
114			
117			
76			4

Island Lake old women ....

85			1
6			2
33			

Plate I

Island Lake Indians.

Plate II

Island Lake Indians.

Plate III

Island Lake Indians.

Plate IV

Island Lake Indians.

Plate V

Island Lake Indians.