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BULLETIN No. 59

ANTHROPOLOGICAL SERIES, No. 13

Anthropometry of the Cree and Saulteaux Indians in Northeastern Manitoba

BY

J. C. Boileau Grant



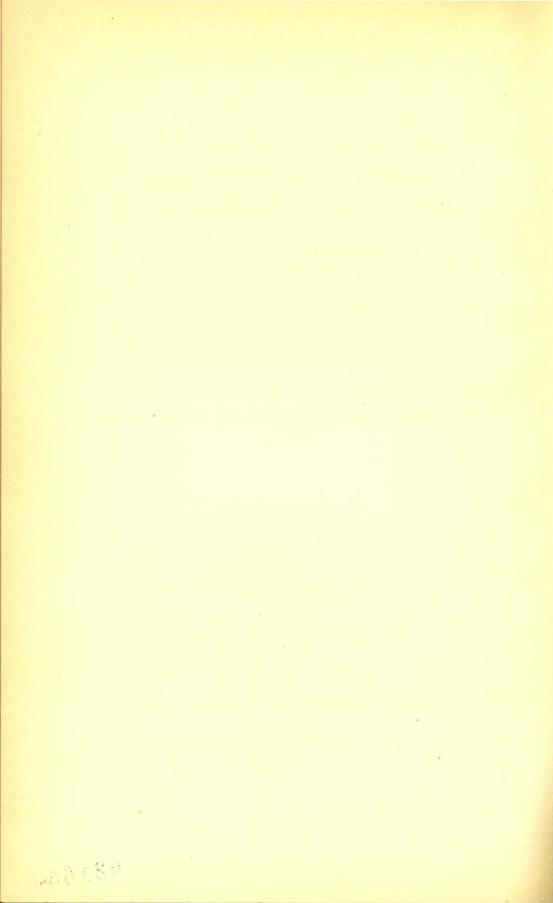
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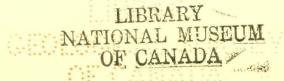
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ANTHROPOMETRY OF THE CREE AND SAULTEAUX INDIANS IN NORTHEASTERN MANITOBA

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.

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

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.

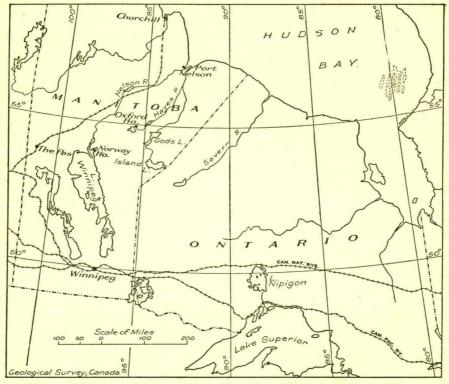


FIGURE 1. Index map showing positions of Island lake, Gods lake, and Oxford House, northeastern Manitoba.

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

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 Haves 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 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 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 It is especially to be noted that the route which at present present time. 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 ap-

parently 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 &}quot;Mr. H. R. Halpin, western old-timer, and former Hudson's Bay employee." Manibba 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

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. 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		88 14
i.e., 62·5 %	Total number examined	32
Gods Lake	The state of the s	7
i.e., 42% of	Total number examined	4
Oxford House		55 4
i.e., 88% of	Total number examined	59
	Adult Females	
Island Lake	Ages 20–59 years	0
i.e., 72·5%	Total number examined	6
Gods Lake	800 00 Journal	9
i.e., 49% of	Total number examined	36
The sections	filla total of OFF adult les 105 en 05 non cont	

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 biparietalbizygomatic 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. 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.

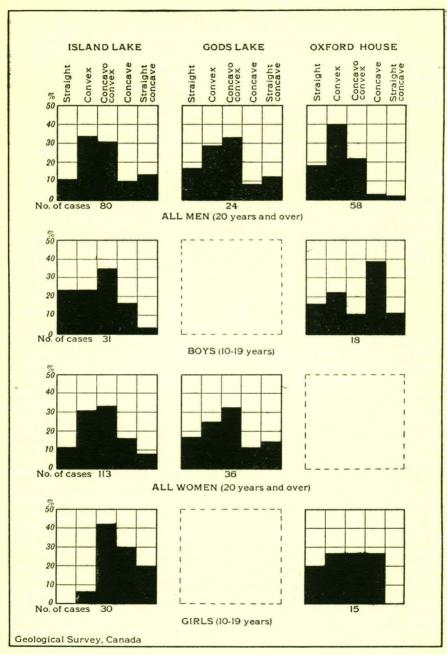


FIGURE 2. Percentage distribution of the shape of the nose.

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 "transcolorations".

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.

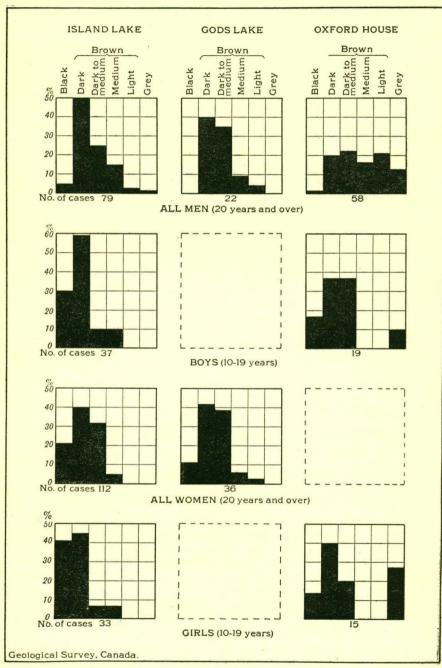


FIGURE 3. Percentage distribution of the colour of the eye.

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 neighbourhoods, and was noticed in seven Island Lake, two Gods Lake, and five Oxford House, Indians. Pig mented conjunctive of a yellowish or muddy-yellow colour were more in e vidence at Island lake than elsewhere.

It was the rule, and n ot the exception, to find teeth so closely crowded together that they overla pped 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. early arrested my attenti on, for one was naturally surprised to find such a condition amongst a pe ople 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 adu lt 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, mor eover, 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 comm only 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 formula¹ 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 form ula 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 in spected.

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

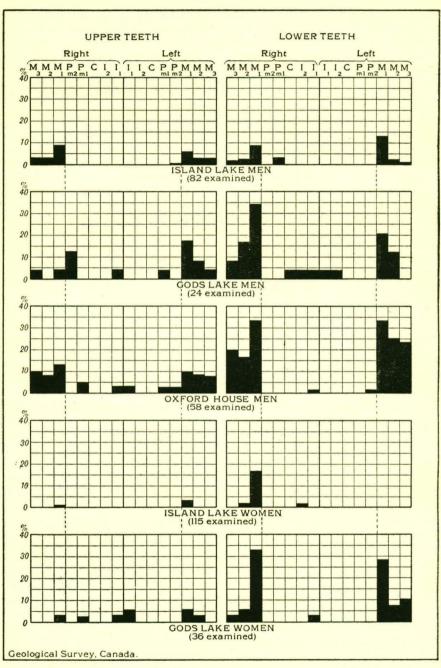


Figure 4. Percentage distribution of carious teeth among men and women (aged 20 years and over).

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 bad 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. Upp er 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}	Pm1	С	I ₂	Iı	Iı	I ₂	С	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 ind ices 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 han d)

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

	Feat	Features and index suggestive of white admixture									Other data				
Serial number	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			
3	+++++++++++++++++++++++++++++++++++++++	++		B M B M B M B M+ B M+ B M+ M M+ M+	+	+ palat	+ + +	93·9 92·4 93·4 93 89·5 92·0 93·9 92·4 93·5 90·6 91·1 93·9 94·0 92·6 91·1 93·9 94·0 92·5	96·5 96·0 97·4 94·8 99·0 101·5 94·2 94·2 99·3	155 143 155 157 157 157 157 157 157 157 157 157	145.5 138 146 151.5 148.5 148.5 149.5 141 140.5 145.5 139 143 143.5 146.5 139 143.5 146.5 149.5	9·5 6 4 12 10·5 8 10·5 1·5 1-6·5 - 2 12·5 9 9·5 11·5 10 10 14·5 8 1 9·5 1 9·5 11·5 13·5 9 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 Sullivan² 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 $170 \cdot 0$ cm., and of those at Oxford House, $172 \cdot 5$ cm. The Oxford House men are, therefore, on an average $2 \cdot 5$ 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 ± 0.48 , and of the Oxford House men ± 0.65 . 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..... $172 \cdot 5 \pm 0.65$ Island Lake men...... $170 \cdot 0 \pm 0.48$

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 $2 \cdot 5$ 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 $2 \cdot 5$ 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

$1 \cdot 0$,	the odds are as 1.0 to	$1 \cdot 0^{1}$
$2 \cdot 0$,	4.6 to	$1 \cdot 0$
$2 \cdot 3$,	7·3 to	$1 \cdot 0$
$2 \cdot 5$,	9.2 to	1.0
$2 \cdot 8,$	16.0 to	1.0
$3 \cdot 0$,	22.0 to	$1 \cdot 0$
$3 \cdot 1,$	26.0 to	1.0
$3 \cdot 5$,	54.0 to	$1 \cdot 0$
$4 \cdot 0$,	142.0 to	$1 \cdot 0$
$5 \cdot 0$,	1,341.0 to	$1 \cdot 0$
$6 \cdot 0,$	19,300·0 to	$1 \cdot 0$
$7 \cdot 0,$	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 $22 \cdot 0$ to $1 \cdot 0$. 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 $2 \cdot 0$, that is to say, where odds are less than $4 \cdot 6$ to $1 \cdot 0$. For example, we learn from table II that the Gods Lake men have an arm stretch of $1 \cdot 2$ cm. less than the Oxford House men, but we do not feel warranted in concluding that this mean difference of $1 \cdot 2$ 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. $(1 \cdot 18)$ is almost as great as the difference $(1 \cdot 2)$ itself.

Arm stretch and probable error......Oxford House men.... $183 \cdot 7 \pm 0.67$ Gods Lake men..... $182 \cdot 5 \pm 0.97$ $1 \cdot 2$

$$\sqrt{(0.67)^2 + (0.97)^2} = \sqrt{0.4489 + 0.9409} = \sqrt{1.3898} = 1.18 = P.E. \text{ diff.}$$

Diff./P.E. diff. = $1 \cdot 2/1 \cdot 18 = 1 \cdot 02 = \text{No.}$ 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 y	vears)		Females (20-59 years)					
	Island	land Gods Oxford Sioux				Island	Gods	Sic	oux		
	lake	lake	House	Pure	Half- bloods	lake	lake	Pure	Half- bloods		
Maximum number	00	177		740	-	100	07	157	10		
of cases1	68 170·0	$\begin{array}{c} 17 \\ 172 \cdot 0 \end{array}$	$\begin{array}{c} 55 \\ 172 \cdot 5 \end{array}$	$540 \\ 172 \cdot 4$	77 173·5	100	$\begin{array}{c} 27 \\ 158 \cdot 2 \end{array}$	157 160·0	$\begin{array}{c} 19 \\ 161 \cdot 2 \end{array}$		
Stature	± 0.48	± 0.75	± 0.65		± 0.52	$157 \cdot 6 \\ \pm 0 \cdot 35$	± 0.71	± 0.28	± 0.90		
Arm stretch2	179.1	180.9	$182 \cdot 1$	181.4	182.2	165.8	167.4	168.3	167.4		
22111 5010001 1	± 0.48	± 0.97	± 0.67		± 0.54		± 0.48		±1.05		
Index of arm				-0.00							
stretch2	105.4	$105 \cdot 2$	$105 \cdot 5$	$105 \cdot 2$	105 0	$105 \cdot 2$	105.8	105.3	103.8		
	± 0.20	± 0.35	± 0.26		± 0.17	± 0.15	± 0.23		± 0.27		
Sitting height	89.9	90.0	88.7	88.5	89.6	83.2	83.3	82.1	83.0		
T 1	± 0.26	± 0.67	± 0.33		± 0.34	± 0.22	± 0.45		±0.76		
Index of sitting height	$53.0 \\ \pm 0.09$	$52 \cdot 3 \\ \pm 0 \cdot 34$	$51 \cdot 3 \\ \pm 0 \cdot 14$	$51.4 \\ \pm 0.05$	$51.6 \\ \pm 0.15$	$52.8 \\ \pm 0.09$	$52 \cdot 6 \\ \pm 0 \cdot 16$	$51.4 \\ \pm 0.10$	$51.4 \\ \pm 0.43$		
Cephalic index	79.4	79.0	76.9	79.6	79.4	79.9	79.4	80.5	80.5		
Cephane index	±0.23	± 0.43	±0.28		±0.20	±0·17	±0.25	±0·15	±0.44		
Glabella ad maxi-	196.1	194.9	195.9	194.9	194.4	188.4	188.7	187.0	187.3		
mum	± 0.57	± 0.92	+0.51		± 0.55		± 0.52		± 0.65		
Biparietal	$155 \cdot 6$	153.8	$\overline{150 \cdot 7}$	155 · 1	$\overline{154 \cdot 3}$	$\overline{150 \cdot 4}$	$149 \cdot 6$	150.9	150.3		
	± 0.40	± 0.68	± 0.45			± 0.25	± 0.47	± 0.26	± 0.70		
Bizygomatic	146.8	145.7	144.4	149 · 1	143 · 4	140.2	$139 \cdot 7$	142.8	139.3		
0 1 1 4 1 1	± 0.37	± 0.93	±0.48			±0.26	± 0.49		± 0.57		
Cephalo-facial	94.4	94.5	95.9	96.1	92.9	93.2	93.5	94.7	92.5		
index Frontal	$\pm 0.17 \\ 104.7$	$\pm 0.55 \\ 106.1$	$\pm 0.28 \\ 104.5$	± 0.09	± 0.25	$\begin{array}{c} \pm 0 \cdot 14 \\ 102 \cdot 7 \end{array}$	$\pm 0.26 \\ 102.9$	±0.18	± 0.29		
minimum	±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		
menton crimon	+0.67	+1.27	± 0.84		+0.66		± 1.19				
Menton-nasion	124.7	127 - 1	$122 \cdot 9$	124.6	121.5	118.5	$119 \cdot 9$	117.4	114.1		
	± 0.50	± 0.82	± 0.54		± 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		
77 11 (1 (1)	± 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				
Nose height	$\pm 0.24 \\ 54.8$	$\pm 0.39 \\ 55.2$	$\pm 0.24 \\ 54.1$	58.3	F4 0	$\frac{\pm 0.22}{50.7}$	± 0.31				
Nose neight	± 0.31	± 0.58	± 0.33		$54.9 \\ \pm 0.27$	± 0.22	$50.6 \\ \pm 0.41$	$55 \cdot 2 \\ \pm 0 \cdot 19$	$51.5 \\ \pm 0.46$		
Nose width	39.9	38.2	38.6	39.9	37.6	35.3	34.5	37.4	34.8		
Trobb Width	± 0.20	±0.62	± 0.26		± 0.24		± 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			
Mouth (length)	60.6	$65 \cdot 6$	$60 \cdot 1$			55.8	58.3				
T 1 1	± 0.34	± 1.08	± 0.30			± 0.32					
Ear length	65.9	65.3	67.6			58.7	59.0				
For width	± 0.35	± 0.66	±0.38			± 0.29					
Ear width	$35.4 \\ \pm 0.21$	$34.7 \\ \pm 0.36$				$33.8 \\ \pm 0.15$	31.8				
Ear index	53.6	52.8				57.9	54.5				
Ear maex	±0.28	± 0.72				± 0.42					
Hand length	192	192	193			180	179				
	± 0.62	± 1.14				±0.46					
Hand width	86	87	90			78	80				
** **	± 0.29	± 0.53				± 0.24					
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.

	Males	(aged 20-59 y	Females	
Measurement or index	Island lake and Gods lake	Island lake and Oxford House	Gods lake and Oxford House	Island lake and Gods lake
StatureArm stretchArm stretch index.	2.2	$3 \cdot 1$ $3 \cdot 6$		2.6
Sitting height. Sitting height index. Cephalic index. Glabella ad maximum.		2·9 10·2 6·9	2·7 4·1	
Biparietal Bizygomatic Cephalo-facial index Frontal minimum	2.3	8·1 4·0 4·6	3·8 2·3 2·3	
Menton-crinion. Menton-nasion Facial index. Upper lip length.	2·5 3·4	2.4	4·3 2·9	
Nose height. Nose width. Nasal index. Mouth length.		4.0	4.9	2.2
Ear length Ear width Ear index Hand length		3.3	3.0	
Hand width Hand index		8·8 7·3	4·7 4·2	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 $3\cdot 0$ 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 $3 \cdot 0$ 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 ($2 \cdot 7$ and $2 \cdot 9$) 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 $3\cdot 0$ is exceeded in twelve different instances; in eight of the twelve instances $4\cdot 0$ is equalled or exceeded, and in five of the twelve $6\cdot 0$ 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 $170 \cdot 0$ cm., or $66 \cdot 9$ inches, tall; the Oxford House men are $2 \cdot 5$ 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 $105 \cdot 4$. 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 $1 \cdot 0$ cm. to $1 \cdot 8$ cm. (approximately $1 \cdot 4$ 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 hall-mark 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 $52 \cdot 2$ index and in the women of Island lake at $52 \cdot 9$ 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. 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 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. 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 (menton-nasion), 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 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.

	1	Females				
Measurement of index	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	
StatureArm stretch index	4.7	4.9			5.4	
Sitting height	5·0 15·5	8.0	Contract of the Contract of	7.3	3·8 10·4 2·6	
Glabella ad maximum. Biparietal.	2.0	2·2 2·4	9.2	6.1	2.9	
Bizygomatic. Cephalo-facial index	5.7	6·0 5·0	9.3	8.0	6·9 6·6	
Menton-nasion	7.5	2·1 4·6	5·9 3·0		4·7 2·4	
Facial index	3·0 10·5		$3.5 \\ 12.0$		6·6 15·5	
Nose width Nasal index	7.1	7·4 4·8	4·7 4·4	2·8 3·0	9·0 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 cephalofacial 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 $3 \cdot 0$, that which represents the height of the nose is less than $2 \cdot 0$, 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 4.5 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	Cephalo- facial index	Facial index	Head length	Head breadth	Face length	Face breadth	Location		
Males													
Saulteaux	25 37 (43) ¹ 9-10 9-10 55	1710 1690 1718 1722 1725	52·7 53·1 52·3 52·1 51·3	80·3 79·0 80·0 77·8 76·9	93·9 94·7 94·9 95·5 95·9	84·0 85·4 87·0 86·0 85·2	195·7 196·1 193·6 199·6 195·9	157.0 154.8 154.8 155.3 150.7	147·3 146·5 146·8 148·2 144·4	$125 \cdot 1 \\ 127 \cdot 6 \\ 126 \cdot 6$	lake		
Females													
Saulteaux	32 68 11 (15) ¹ 17 (18) ¹	1578 1574 1533 1613	52·3 53·7 52·8 52·4	80·1 79·3 79·6 79·8	92.5 93.0 94.9 93.1	84·6 85·0 84·0 86·1	188 · 6 188 · 4 189 · 6 188 · 1	150·4 150·4 150·9 150·1	139·1 140·8 141·7 139·7	119.1	Island lake Gods 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. 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

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Frequency Distribution of Stature

Stature in cm.		Male		Fen	nale
Stature in cm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGE	о 20 то 59 ч	EARS)		
148. 151. 154. 157. 160. 163. 166. 169. 172. 175. 178. 181. 184. Mean. σ. F _m V. N.	1 3 1 4 6 17 13 12 4 0 1 1 170·0 ±5·65 ±0·48 3·32 62	172.0 ±3.87 ±0.75 2.25 12	$ \begin{array}{c} 1\\ 1\\ 4\\ 5\\ 6\\ 6\\ 6\\ 1\\ 1 \end{array} $ $ \begin{array}{c} 172 \cdot 5\\ \pm 5 \cdot 39\\ \pm 0 \cdot 65\\ 3 \cdot 13\\ 31 \end{array} $	157 · 6 ±5 · 22 ±0 · 35 3 · 31 100	158·2 ±5·30 ±0·71 3.35 25
ADU	LTS (AGED 6	60 YEARS AND	over)		
Mean. σ. E _m .	$165.7 \\ \pm 5.27 \\ \pm 1.12$	171.9	164-1	160.0	157-9
V N	$3.18 \\ 10$	6	2	7	5

Distribution of Stature According to Age

			1	Male			Female					
Age in years	Island lake			Gods lake				Island lake		Gods lake		xford House
,	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10. 11. 12. 13. 14. 15. 16. 17. 18.	4 2 2 8 6 1 4 5 4 3	$\begin{array}{c} 129 \cdot 8 \\ 139 \cdot 7 \\ 138 \cdot 2 \\ 146 \cdot 3 \\ 149 \cdot 2 \\ 158 \cdot 2 \\ 159 \cdot 5 \\ 170 \cdot 0 \\ 169 \cdot 1 \\ 168 \cdot 1 \end{array}$			1 1 1 2 3 2 0 3 2 1	$\begin{array}{c} 132 \cdot 9 \\ 132 \cdot 4 \\ 133 \cdot 9 \\ 145 \cdot 2 \\ 141 \cdot 5 \\ 163 \cdot 2 \\ \\ \\ 149 \cdot 9 \\ 162 \cdot 2 \\ 167 \cdot 5 \\ \end{array}$	4 2 4 5 4 5 8	145·7 147·5 151·5 158·0 160·4 154·0 156·2	0000000	163·2 152·6	1 1 1 2 3 4 1 0 0 2	130 · 133 · 143 · 145 · 149 · 8 154 · 140 · 8
0–59 0+	62 10	$170 \cdot 0 \\ 165 \cdot 7$	12 6	$172 \cdot 0 \\ 171 \cdot 9$	31 2	$172 \cdot 5 \\ 164 \cdot 1$	100	157·6 160·0	25 5	158·2 157·9	The second	

Frequency Distribution of Arm Stretch¹

Arm stretch in cm.		Male		Fer	nale
Min street in cin.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	ADULTS (AGEI	о 20 то 59 чи	EARS)		
154 157 160 163 166 169 172 175 178 181 184 187 190 193 196 Mean 7	3 5 6 6 21 12 3 4 0 1 1 180·5 ±5·52 ±0·48 3·06 61	2 2 2 1 4 1 1 	2 2 3 4 6 9 3 2 183·7 ±5·51 ±0·67 3·00 31	2667 2020 1913 4440 1 166·6 ±5·62 ±0·39 3·38 96	168·2 ±3·55 ±0·48 2·11 25
ADT	ULTS (AGED 6	0 YEARS AND	over)		
Mean	$177 \cdot 4 \\ \pm 6 \cdot 12 \\ \pm 1 \cdot 31$	183-9	178-6	167-3	171.9
7 N	$\begin{array}{c} 3\cdot 45 \\ 10 \end{array}$	6	·····i	7	<u>.</u> 5

Distribution of Arm Stretch According to Age

				Male		Female						
Age in years		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		136.8			1	150.0					1	144.
11	2	144.5			1	142.6					1	141.
12	2	145.4	50.50.000		1	151.9			100 120 100 100		1	158
13	8	$153 \cdot 5$			2	$159 \cdot 4$	4	151.6			2	162
14		$154 \cdot 9$			3	$155 \cdot 4$	2	$156 \cdot 2$			3	166.
15	1	$166 \cdot 3$			2	176.8	4	163.5	1	$166 \cdot 7$	4	168.
16	4	$167 \cdot 1$			0		5	167.3	3	150.9	1	155.
17	5	$177 \cdot 9$			3	166.0	4	168.0			0	
18	4	180.0			2	175.6	3	160.6			0	
19	3	$174 \cdot 5$			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	$183 \cdot 9$	1	178.6	7	167.3	5	171.9		

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

Frequency Distribution of Index of Arm Stretch¹

Index		Male		Fer	nale							
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake							
ADULTS (AGED 20 TO 59 YEARS)												
100 101 102 103 104 105 106 107 108 109 110 111 112 113 Mean σ. Em. V. N	$\begin{array}{c} 1\\0\\1\\4\\4\\9\\9\\12\\13\\7\\4\\3\\3\\1\\1\\1\\1\\1\\2\cdot 34\\\pm 0\cdot 20\\2\cdot 19\\61\end{array}$	2 3 3 2 0 1 1 1 1 106-2 ±1-77 ±0-35 1-67 12	1 2 3 6 5 6 4 3 0 0 0 0 1 106.3 ± 2·18 ± 0·26 2·06 31	2 0 7 6 13 14 21 13 10 6 3 1 1 	106·2 ±1·68 ±0·23 1·58 25							
ADU	ULTS (AGED 6	0 YEARS AND	over)									
Mean _T	$ \begin{array}{r} 106.8 \\ \pm 1.47 \\ \pm 0.31 \end{array} $	107.0	105-6	104.6	108-9							
VN	$\begin{array}{c} 1.38 \\ 10 \end{array}$	6	1	7	5							

Distribution of Index of Arm Stretch According to Age

				Male			Female							
Age in years		sland lake		Gods lake		xford House		sland lake		Gods lake		Oxford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean		
10 11 12 13 14 15 16 17 18	4 2 2 8 6 1 4 5 4 3	$\begin{array}{c} 105 \cdot 4 \\ 103 \cdot 5 \\ 105 \cdot 2 \\ 104 \cdot 9 \\ 103 \cdot 8 \\ 105 \cdot 1 \\ 104 \cdot 9 \\ 104 \cdot 7 \\ 106 \cdot 5 \\ 103 \cdot 8 \end{array}$			1 1 1 2 3 2 0 3 2 1	112·9 107·7 113·4 109·7 109·7 108·3 		104·1 105·9 107·9 105·9 104·7 104·2 107·4	1 3	102.1	1 1 1 2 3 4 1 0 0 2	111·2 106·0 110·4 111·2 110·8 108·7 110·8		
20–59 60+	61 10	106·5 106·8	12 6	106·2 107·0	31 1	106·3 105·6	96 7	$105.7 \\ 104.6$	25 5	$106 \cdot 2 \\ 108 \cdot 9$				

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

Frequency Distribution of Sitting Height

Sitting height in cm.		Male		Fen	nale
Sitting neight in cm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGED	20 то 59 чел	ARS)		
6-0 7-5 9-0 9-0 9-5 3-5 5-0 3-5 3-5 -0 9-5 4-0 9-5 1-0 9-5 1-0 9-7 1-0 1-0 1-0 1-0 1-0 1-0 1-0 1-0 1-0 1-0	$ \begin{array}{c} 1\\1\\3\\7\\10\\9\\16\\7\\5\\2\\1\\\end{array}\\ 89 \cdot 9\\\pm 3 \cdot 00\\\pm 0 \cdot 26\\3 \cdot 34\\62\\\end{array} $	20 00 11 22 33 30 11 	1 4 5 6 6 5 5 4 1 1 88·7 ±2·69 ±0·33 3·03 31	2 1 8 5 16 19 12 10 4 1 1 83·2 ±2·82 ±0·22 3·38 78	83·3 ±3·32 ±0·45 3·99
AD	ULTS (AGED 6	0 YEARS AND	over)		
ean	$ 87.0 $ $ \pm 2.65 $ $ \pm 0.59 $	89.1	85.5	84.0	81.7
•	$\frac{3 \cdot 04}{9}$	6	2	6	6

Distribution of Sitting Height According to Age

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

Frequency Distribution of Sitting Height Index

Index		Male		Fem	ale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGE	20 то 59 ч	EARS)		
18: 0	53·0 ±1·07 ±0·09 2·01 62	10 11 01 11 15 11 15 11 11 52:3 ±1:74 ±0:34 3:33	51·3 ±1·14 ±0·14 2·23	$\begin{array}{c} 1\\2\\6\\16\\20\\9\\17\\6\\0\\1\end{array}$	52·6 ±1·19 ±0·16 2·26
ADU	ULTS (AGED 6	O YEARS AND	over)		
dean	52.7 ± 1.47 ± 0.33 2.79	51.9	2.2	52.5	52.0
N	2.79	6	1	5	6

Distribution of Sitting Height Index According to Age

]	Male				F	emale			
Age Island lake			Gods lake		Oxford House		sland 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.
11	2	$52 \cdot 9$	110,110,110		1	53.9				Calculate Stranger	1	55.
12	2	$52 \cdot 3$			1	55.5					1	54.
13	8	52.4	200000		2	52.5	4	52.3			2	53.
4	6	$52 \cdot 4$			3	54.8	2	52.5			3	54
5	1	$51 \cdot 5$			2	$54 \cdot 5$	4	52.7	1	53.0	4	53
6	4	$52 \cdot 3$			0		4	52.1	3	52.8	1	56
7	5	$52 \cdot 8$			3	54	3	52.6			0	
8	4	$52 \cdot 7$			2	54.4	3	53.8			0	
9	3	$53 \cdot 4$			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		
0+	9	$52 \cdot 6$	6	51.9	1	53.6	5	52.5	6	52.0		

Frequency Distribution of Cephalic Index

Index		Male	_	Fen	nale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGEI	20 то 59 үн	EARS)		
5·1 6·4 7·7 9·0 0·3 1·6 2·9 4·2 5·5 6·8 8·1 9·4 0·7 2·0 3·3 3·4 6 5·7 7·2	1 6 5 10 8 18 8 4 5 3	1 4 1 4 2 2 2 2	1 0 0 0 2 1 6 5 8 12 9 6 4 1	2 7 14 26 18 11 10 6 5 0	\$ 4 4 5 8 4 4 3
lean	79.4 ± 2.81 ± 0.23 3.54 68	$79 \cdot 0$ $\pm 2 \cdot 62$ $\pm 0 \cdot 43$ $3 \cdot 32$ 17	$ \begin{array}{c} 76 \cdot 9 \\ \pm 3 \cdot 06 \\ \pm 0 \cdot 28 \\ \hline 3 \cdot 98 \\ 55 \end{array} $	$79 \cdot 9$ $\pm 2 \cdot 59$ $\pm 0 \cdot 17$ $3 \cdot 24$ 100	$79.4 \\ \pm 1.92 \\ \pm 0.25 \\ 2.41 \\ 27$
ADU	LTS (AGED 6	0 YEARS AND	over)		
lean	$80 \cdot 0$ $\pm 2 \cdot 91$ $\pm 0 \cdot 52$ $3 \cdot 63$ 14	79·3	80.4	79.8 ± 3.61 ± 0.63 4.52 15	$80.6 \pm 1.08 \pm 0.24 \pm 0.34$

Distribution of Cephalic Index According to Age

]	Male			Female					
Age Island lake No. Mea		Gods lake		Oxford House		Island lake		Gods lake		Oxford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
0	4	80.5			1	78.5					1	79.
2	2 2	80·4 80·8			1	81·7 80·9					1	79 · 80 ·
3 4	8	81 · 4 81 · 0			2 3	$79.4 \\ 80.0$	2	$\begin{array}{c} 77 \cdot 8 \\ 79 \cdot 2 \end{array}$			3	76· 80·
5 6	1 4	$75.4 \\ 78.4$			1	76·8 85·6	5	80·8 81·1	$\frac{1}{3}$	$\begin{array}{c} 77 \cdot 7 \\ 79 \cdot 7 \end{array}$	1	78 · 84 ·
7 8	5 4	$78 \cdot 3$ $77 \cdot 5$	St. Cherry		3 2	$78 \cdot 1$ $79 \cdot 0$	5	$\begin{array}{c} 78 \cdot 7 \\ 80 \cdot 0 \end{array}$			0	
9	3	82.4			3	74.9	8	81.4	_		2	78.
0–59 0+	68	$79 \cdot 4 \\ 80 \cdot 0$	17	$79.0 \\ 79.3$	55 4	$76.9 \\ 80.4$	100 15	$79.9 \\ 79.8$	27 9	$79 \cdot 4 \\ 80 \cdot 6$		

Frequency Distribution of Length of Head (Glabella Ad Maximum)

Length of head in mm.		Male		Fer	nale
Length of head in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGEI	20 то 59 ч	EARS)		(
174 177 180 183 186 189 192 195 195 198 201 204 207 210 Mean σ . Em. V	$\begin{array}{c} 1\\1\\4\\1\\7\\15\\13\\8\\7\\6\\3\\2\\\end{array}$ $\begin{array}{c}196\cdot1\\\pm 6\cdot95\\\pm 0\cdot57\\3\cdot54\\68\end{array}$	1 1 3 4 2 1 5 5 1 5 1 5 1 5 1 7 1 7 1 7 1 7 1 7 1	1 0 0 12 11 14 6 6 3 5 5 3 195 · 9 ± 5 · 65 5 ± 0 · 51 2 · 88 55	3 4 8 13 22 24 9 9 8 8 188·4 ±5·81 ±0·39 3·08 100	188·7 ±4·03 ±0·52 2·13 27
ADT	ULTS (AGED 6	00 YEARS AND	o over)		
Mean. σ. E _m . V.	$196 \cdot 4$ $\pm 6 \cdot 40$ $\pm 1 \cdot 15$ $3 \cdot 26$ 14	200.0	195.5	$\begin{array}{c} 190 \cdot 0 \\ \pm 10 \cdot 39 \\ \pm 1 \cdot 75 \\ 5 \cdot 47 \\ 15 \end{array}$	$190 \cdot 3$ $\pm 3 \cdot 59$ $\pm 0 \cdot 81$ $1 \cdot 89$ 9

Distribution of Length of Head According to Age

]	Male					F	emale			
Age in years				Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	
10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20–59. 60+	4 2 2 8 6 1 4 5 4 3 68 14	182·0 179·0 185·0 184·0 196·0 197·5 187·0 193·0 196·0 189·5		194.9	1 1 1 2 3 2 1 3 2 1 3 2 3 2 3 4	186·0 175·0 181·0 189·0 182·0 194·0 181·5 188·5 195·0	4 2 4 5 5 5 5 8 100 15	183·0 186·0 187·0 187·0 184·0 182·0 188·4 190·0		193·0 184·0	1 1 1 2 3 4 1 0 0 2	178.0 176.5 175.5 188.0 186.0 185.5 174.0	

Frequency Distribution of Width of Head (Biparietal Maximum)

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

ADULTS (AGED 20 TO 59 YEARS)

144 147 150 153 156 159 162 165 Mean σ	$ \begin{array}{c} 3 \\ 6 \\ 6 \\ 18 \\ 19 \\ 6 \\ 8 \\ 2 \end{array} $ $ \begin{array}{c} 155 \cdot 6 \\ \pm 4 \cdot 95 \\ \pm 0 \cdot 40 \\ 3 \cdot 18 \\ 68 \end{array} $	2 4 8 1 1 0 1 1 153·8 ±4·18 ±0·68 2·71 17		150·4 ±3·75 ±0·25 2·49 100	149·6 ±3·59 ±0·47 2·40
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ADULTS (AGED 60 YEARS AND OVER)

Mean. σ. Εm. V. N.	$157 \cdot 2$ $\pm 4 \cdot 00$ $\pm 0 \cdot 72$ $2 \cdot 55$ 14		157.0	$152 \cdot 1$ $\pm 2 \cdot 57$ $\pm 0 \cdot 43$ $1 \cdot 69$ 16	$ \begin{array}{c} 153 \cdot 0 \\ \pm 2 \cdot 00 \\ \pm 0 \cdot 45 \\ 1 \cdot 31 \\ 9 \end{array} $
N	14	7	4	16	9

Distribution of Width of Head According to Age

]	Male			Female						
Age Island lake			Gods lake		Oxford House		Island lake		Gods lake		xford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	
10	4	146.0			1	146.0					1	142.0	
11 12	2 2	$144 \cdot 0 \\ 149 \cdot 5$			1 1	$143.0 \\ 146.5$	1				1 1	$140.0 \\ 141.5$	
13	8	$150 \cdot 0$			2	150.0	4	142.5			2	144.0	
14	6	$150 \cdot 0$			3	$145 \cdot 5$	2	144.5			3	149.0	
15	1	$149 \cdot 0$			2	$149 \cdot 0$	4	$150 \cdot 5$	1	150.0	4	146.0	
16	4	$146 \cdot 5$			1	$155 \cdot 0$	5	151.0	3	147.0	1	147 - 5	
17	5	$151 \cdot 0$			3	142.0	5	147.0			0		
18	4	$152 \cdot 0$			2	$149 \cdot 0$	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		100	150.4	27	149.6			
60+	14	$157 \cdot 2$	7	$158 \cdot 5$	4	$157 \cdot 0$	16	152 · 1	9	153.0			

Frequency Distribution of Width of Face (Bizygomatic Maximum)

Width of face in mm.		Male		Fem	ale	
witth of face in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake	
, A	DULTS (AGED	20 то 59 чи	EARS)			
32 35 38 41 44 47 50 53 56	4 14 16 17 7 8 2	2 2 1 4 3 4 0 1	1 4 8 13 10 9 5 5	8 18 27 22 23 2	3 3 11 7 1 2	
lean	$ \begin{array}{c} 146 \cdot 8 \\ \pm 4 \cdot 52 \\ \pm 0 \cdot 37 \\ 3 \cdot 08 \\ 68 \end{array} $	$145.7 \\ \pm 5.69 \\ \pm 0.93 \\ 3.90 \\ 17$	$144 \cdot 4$ $\pm 5 \cdot 26$ $\pm 0 \cdot 48$ $3 \cdot 64$ 55	140·2 ±3·87 ±0·26 2·76 100	$ \begin{array}{c} 139 \cdot 7 \\ \pm 3 \cdot 77 \\ \pm 0 \cdot 49 \\ 2 \cdot 70 \\ 27 \end{array} $	
ADI	ULTS (AGED 6	0 YEARS AND	OVER)			
fean	10 70		148	$ \begin{array}{c c} 141 \cdot 3 \\ \pm 3 \cdot 27 \\ \pm 0 \cdot 55 \\ 2 \cdot 31 \\ 16 \end{array} $	$143.7 \\ \pm 4.92 \\ \pm 1.11 \\ 3.43 \\ 9$	

Distribution of Width of Face According to Age

				Male					F	emale		
Age in years		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 11 12 13 14 15 16 17 18 19 20–59 60+	4 2 2 8 6 1 4 5 4 3 68 14	126·5 125·5 134·0 133·0 132·5 135·5 136·0 144·0 141·5 142·5		145·7 151·0	1 1 1 2 3 2 1 3 2 3 2 3 2 3 3 2 3 4	128·0 125·0 135·5 134·0 127·5 138·5 141·5 133·0 140·0 139·0		130·5 132·5 140·5 139·0 137·5 135·0 137·5	1 3	137·0 135·0 139·7 143·7	1 1 1 2 3 4 1 0 0 2	122 · 5 122 · 5 128 · 0 128 · 0 134 · 0 131 · 5 127 · 5

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

Index		Male		Fen	nale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
AI	OULTS (AGED	20 то 59 чел	ARS)		
88-0 89-5 91-0 92-5 94-0 95-5 97-0 93-5 00-0 01-5 03-0 04-5 Mean	$\begin{array}{c} 1\\0\\6\\12\\19\\20\\7\\2\\1\\1\\\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\&\\$	94·5 ±3·33 ±0·55 3·52 17	1 2 7 7 15 6 8 8 8 5 1 1 1 1 95 · 9 ±3 · 10 ±0 · 28 3 · 23 55	93·2 ±2·08 ±0·14 2·24 100	93·5 ±2·00 ±0·26 2·14 27
Mean	95.1	95.4	94·4	92.7	$93.8 \\ +2.29$
Mean σ E _m V N	$egin{array}{c} 95 \cdot 1 \\ \pm 2 \cdot 30 \\ \pm 0 \cdot 41 \\ 2 \cdot 42 \\ 14 \end{array}$		94.4	$ \begin{array}{r} 92.7 \\ \pm 2.24 \\ \pm 0.38 \\ 2.42 \\ 16 \end{array} $	

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

]	Male			Female						
Age in years	Island lake		Gods lake			xford Iouse	Island lake		Gods lake		Oxford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	
.0	4	86.6			1	87.7					1	86.	
1	2 2	$87 \cdot 3$ $89 \cdot 6$	1 2 2 2 2		1	$87.4 \\ 92.5$				2 2 2 2 2 2 2 2 2	1	87 · 90 ·	
3 4	8 6	88·9 88·1			2 3	89·5 87·9	2	$91.6 \\ 91.7$			2 3	89 89	
5 6	1 4	90.9			2 1	93·0 91·3	5	$93.5 \\ 92.1$	3	$ \begin{array}{c} 91 \cdot 3 \\ 92 \cdot 1 \end{array} $	1	90 86	
7 8	5 4	$\begin{array}{c} 95 \cdot 4 \\ 93 \cdot 2 \end{array}$			3 2	$94 \cdot 1 \\ 93 \cdot 8$	5	93·6 91·8			0		
9	3	91.4			3	95.3	8	93.1				90	
0–59 0+	68 14	$94 \cdot 4 \\ 95 \cdot 1$	17	$94.5 \\ 95.4$	55 4	$95.9 \\ 94.4$	100 16	$93 \cdot 2 \\ 92 \cdot 7$	27 9	93·5 93·8			

Frequency Distribution of Width of Forehead (Frontal Minimum)

Width of forehead in mm.		Male		Fem	nale
witth of forenead in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGE	о 20 то 59 чи	EARS)	-	
91 94 97 100 103 106 109 112 115	1 3 4 12 16 20 6 3 2	2 6 6 1 2	2 5 11 15 11 7 4	5 19 23 32 13 6 2	4 9 8 5 1
Mean. σ E _m . V. N.	104.7 ± 4.78 ± 0.39 4.57 67	$106 \cdot 1$ $\pm 3 \cdot 38$ $\pm 0 \cdot 55$ $3 \cdot 18$ 17	$104 \cdot 5$ $\pm 4 \cdot 47$ $\pm 0 \cdot 41$ $4 \cdot 23$ 55	$ \begin{array}{c} 102 \cdot 7 \\ \pm 4 \cdot 01 \\ \pm 0 \cdot 27 \\ \hline 3 \cdot 91 \\ 100 \end{array} $	$102 \cdot 9$ $\pm 3 \cdot 18$ $\pm 0 \cdot 41$ $3 \cdot 09$ 27
ADI	ULTS (AGED 6	00 YEARS AND	over)	-	
Mean σ Εm. V. N.	$103 \cdot 4$ $\pm 2 \cdot 82$ $\pm 0 \cdot 51$ $2 \cdot 73$ 14	107	108	$ \begin{array}{c} 102 \cdot 1 \\ \pm 2 \cdot 78 \\ \pm 0 \cdot 47 \\ 2 \cdot 72 \\ 16 \end{array} $	$ \begin{array}{r} 105 \cdot 0 \\ \pm 3 \cdot 46 \\ \pm 0 \cdot 78 \\ \hline 3 \cdot 30 \\ 9 \end{array} $

Distribution of Width of Forehead According to Age

			1	Male			Female					
Age 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. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20-59. 60+	2 0 2 8 6 1 4 5 4 3	99·0 100·0 102·0 104·0 105·0 103·5 103·0 105·0 104·7 103·4		106-1	1 1 1 2 3 2 1 3 2 1 3 2 3 3 2 3 3 5 4	$101 \cdot 0$ $97 \cdot 0$ $106 \cdot 0$ $103 \cdot 0$ $105 \cdot 0$ $101 \cdot 0$ $99 \cdot 0$ $101 \cdot 5$ $103 \cdot 0$ $104 \cdot 5$ $108 \cdot 0$	 4 2 4 5 5 5 5 8 100 16	100·0 103·5 105·0 106·5 101·5 102·6 102·6	1 3		1 1 1 2 3 4 1 0 0 2	101·0 96·0 101·0 101·5 104·0 102·5 95·0

Frequency Distribution of Length of Face (Menton-Crinion)

Length of face in mm.		Male		Fen	nale
Length of face in finit.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGEI	20 то 59 үн	EARS)		
155. 160 165. 170. 175. 180. 185. 190. 195. 200. Mean. σ. Em. V. N.	3 4 15 11 14 14 6 1 184·4 ±8·20 ±0·67 4·45 68	2 2 0 7 3 3 3 186·7 ±7·76 ±1·27 4·16 17	1 2 2 12 13 8 8 8 5 4 184·6 ±9·22 ±0·84 5·00 55	2 2 20 18 27 16 11 3 1 1	178·1 ±9·16 ±1·19 5·14 27
ADU	ULTS (AGED 6	0 YEARS AND	OVER)		
Mean σ. Ε _m . V	$186 \cdot 3$ $\pm 7 \cdot 76$ $\pm 1 \cdot 40$ $4 \cdot 17$ 14	187.0	187-0	$176 \cdot 3$ $\pm 9 \cdot 29$ $\pm 1 \cdot 62$ $5 \cdot 27$ 15	$173 \cdot 1$ $\pm 4 \cdot 58$ $\pm 1 \cdot 03$ $2 \cdot 65$ 9

Distribution of Length of Face According to Age

			Male		Female							
Age in years				Gods lake	Oxford House		Island lake		Gods lake		Oxford House	
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10. 11. 12. 13. 14. 15. 16. 17. 18. 19.	2 0 2 8 6 1 4 5 4 3 68 14	166·0 168·5 165·0 169·0 184·0 173·5 186·5 184·0 184·3 186·3		186·7 187·0	1 1 1 2 3 2 1 3 2 3 2 3 2 3 4	$\begin{array}{c} 163 \cdot 0 \\ 162 \cdot 0 \\ 160 \cdot 0 \\ 169 \cdot 5 \\ 168 \cdot 0 \\ 185 \cdot 5 \\ 174 \cdot 0 \\ 176 \cdot 0 \\ 189 \cdot 0 \\ 182 \cdot 0 \\ \hline \\ 184 \cdot 6 \\ 187 \cdot 0 \\ \end{array}$	4 2 4 5 5 5 8 100 15	160·5 169·0 171·5 175·0 173·0 177·5 174·5	1 3			147 · 162 · 159 · 164 · 182 · 173 · 160 · 173 ·

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Frequency Distribution of Length of Face (Menton-Nasion)

Length of face in mm.		Male		Fen	nale
Length of face in firm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGE	о 20 то 59 че	CARS)		
104 107 110 113 116 119 122 125 128 131 133 140 Mean	10 22 15 99 13 19 5 9 2 2 2 2 124.7 ±6.16 ±0.50 4.94 68	2 4 5 1 1 1 1 1 27·1 ±5·03 ±0·82 3·96 17	1 2 1 6 13 13 13 6 8 4 0 0 1 122 · 9 ± 5 · 90 ± 0 · 54 4 · 80 55	118·5 ±4·77 ±0·32 4·03 100	1100 22889933 11221 11909±4.93 ±0.644.1127
ADV	ULTS (AGED	60 YEARS AND	over)	n.	
Меап. σ. F _m . V. N	$127 \cdot 3$ $\pm 6 \cdot 96$ $\pm 1 \cdot 26$ $5 \cdot 47$ 14	125.5	126.0	$\begin{array}{c} 118 \cdot 1 \\ \pm 4 \cdot 85 \\ \pm 0 \cdot 82 \\ 4 \cdot 10 \\ 16 \end{array}$	119·0 ±5·48 ±1·23 4·60 9

Distribution of Length of Face According to Age

			Male				Female					
Age in years	Island lake		Gods lake		Oxford House		Island lake		Gods lake		Oxford House	
No. M	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	
0 1	2	107·0 101·0			1	$102 \cdot 0$ $102 \cdot 0$					1	101 109
2 3	8	113·5 111·5			1 2	$109 \cdot 0 \\ 112 \cdot 5$	4	107-0			1 2	101
4 5	6	$112 \cdot 0 \\ 121 \cdot 0$			3 2	$113.0 \\ 123.0$	2 4	$109.5 \\ 111.0$	1	114.0	3 4	118 115
6 7	5	116·0 127·0			3	118·0 116·0	5 5	115·0 117·5	10,000,000	113.0	0	101
8 9	3	$123 \cdot 5$ $120 \cdot 0$			3	$128.0 \\ 122.0$	5 8	118·5 115·0			0 2	115
0–59 0+	68 14	124·7 127·3	17	127·1 125·5	55 4	122·9 126·0	100 16	118·5 118·1	27	119·9 119·0		

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

Index		Male	9	Fen	nale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
AI	OULTS (AGE	р 20 то 59 үн	EARS)		
69·3 71·4 73·5 75·6 77·7 79·8 81·9 84·0 88·1 88·2 90·3 992·4 94·5 96·6	1 0 0 1 4 10 15 12 12 6 3 3 2	1 1 2 2 3 3 1 3 1	1 3 2 6 11 10 6 9 4 1 1	1 1 6 18 15 23 20 9 5 2	1 0 4 2 9 6 1 2 1 0
Mean. σ. E _m . V. N.	84·8 ±4·49 ±0·37 5·30 68	87·7 ±4·65 ±0·76 5·31 17	85·2 ±4·74 ±0·43 5·57 55	$\begin{array}{c} 84 \cdot 6 \\ \pm 3 \cdot 71 \\ \pm 0 \cdot 25 \\ 4 \cdot 38 \\ 100 \end{array}$	$\begin{array}{c} 85.8 \\ \pm 4.24 \\ \pm 0.55 \\ 4.95 \\ 27 \end{array}$
Mean. σ. Ε _m . V.	85.6 ±4.66 ±0.84 5.44 14	83·0	85·0	84·1 ±3·86 ±0·65 4·59 16	$\begin{array}{c} 82 \cdot 4 \\ \pm 4 \cdot 29 \\ \pm 0 \cdot 96 \\ 5 \cdot 20 \\ 9 \end{array}$

Distribution of Facial Index According to Age

]	Male				Female						
Age in years			Gods lake		Oxford House		Island lake		Gods lake			xford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean		
0	2	85.0			1	79.7					1	82.		
1	1	81.5			1	81.6			100000000000000000000000000000000000000		1	89		
2	2	$84 \cdot 8$			1	80.4					1	78		
3	8	$83 \cdot 6$			2	83.8	4	81.9			2	86		
4	6	$84 \cdot 4$			3	88.8	2	82.6			3	88		
5	1	$89 \cdot 3$			2	88.8	4	78.8	1	83.2	4	87		
6	4	85.3			1	$83 \cdot 4$	5	82.8	3	83.4	1	79		
7	5	88.3			3	87.2	5	85.4			0			
3	4	87.3			2	91.6	5	87.9			0			
9	3	84.1			3	88.1	8	83.4			2	87		
0-59	68	84.8	17	87.7	55	85.2	100	84.6	27	85.8				
0+	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		Fem	ale
Length of upper up in mm.	Island lake	Gods lake	Oxford House	Island Lake	Gods Lake
A	DULTS (AGEI	20 то 59 че	ARS)	(
9	3 3 7 20 19 11 4	2 2 7 3 3	1 8 15 13 11 3 1	2 7 16 18 14 10	6 6 6 8 1
Mean σ E _m V.	$ \begin{array}{r} 16.5 \\ \pm 2.90 \\ \pm 0.24 \\ 17.54 \\ 68 \end{array} $	17·9 ±2·40 ±0·39 13·44 17	$ \begin{array}{c} 17 \cdot 0 \\ \pm 2 \cdot 55 \\ \pm 0 \cdot 24 \\ 15 \cdot 01 \\ 52 \end{array} $	$ \begin{array}{c} 17.4 \\ \pm 2.63 \\ \pm 0.22 \\ 15.08 \\ 67 \end{array} $	16.9 ± 2.42 ± 0.31 14.33 27
ADI	ULTS (AGED 6	60 YEARS AND	OVER)		
Mean σ E _m V N	19.7	20	19	$ \begin{array}{c} 16.8 \\ \pm 2.63 \\ \pm 0.63 \\ 15.72 \\ 8 \end{array} $	18·8 ±3·40 ±0·76 18·05

Distribution of Length of Upper Lip According to Age

			Male					Female					
Age Island lake			Gods lake		Oxford House		Island lake		Gods lake		xford House		
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	
10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20–59.	1 1 5 3 3	16·0 15·0 16·0 16·0 18·0 17·0 20·0 18·0		17.0	1 1 1 2 3 2 1 3 2 3 2 3	13·0 15·0 18·0 16·5 18·0 17·5 18·0 15·5 18·0	2 0 2 3 3 2 6			19.0 14.0	1 1 2 3 4 1 0 0 2	10 · 13 · 12 · 16 · 13 · 16 · 14 · 1	
0 - 59 0+	68	$\substack{16\cdot 5\\19\cdot 7}$	17 7	$17.8 \\ 20.0$	52 4	19.0	8	16.7	9	16·9 18·8			

Frequency Distribution of Height of Nose

			(,)		
Height of nose in mm.		Male		Fem	nale
neight of nose in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	DULTS (AGEI	20 то 59 үг	EARS)		
1	4 18 19 14 10 3	1 2 7 4 2 2	2 3 10 21 12 6	1 8 27 36 19 8	1 1 7 11 6 1
f.ean. 5.D. 2.E. 3. of V.	54.8 ± 3.83 ± 0.31 6.99 68	55·2 ±3·57 ±0·58 6·47 17	$54 \cdot 1$ $\pm 3 \cdot 56$ $\pm 0 \cdot 33$ $6 \cdot 58$ 54	50·7 ±3·27 ±0·22 6·46 99	$50 \cdot 6$ $\pm 3 \cdot 13$ $\pm 0 \cdot 41$ $6 \cdot 19$ 27
ADA	ULTS (AGED 6	0 YEARS AND	over)		
Mean S. D. P.E _n . C. of V. No.	$57 \cdot 6$ $\pm 3 \cdot 62$ $\pm 0 \cdot 65$ $6 \cdot 28$ 14	55·5 7	56.5	$52 \cdot 6$ $\pm 3 \cdot 61$ $\pm 0 \cdot 63$ $6 \cdot 87$ 15	$52 \cdot 3$ $\pm 2 \cdot 05$ $\pm 0 \cdot 46$ $3 \cdot 93$ 9

Distribution of Height of Nose According to Age

]	Male			Female						
Age in years				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 2	51	and the time.		1	44 47			× 6000		1	48	
12 13	8	48		*******	2	45	3	44		*******	9	4.	
14	2	49			3	46	1	46		******	2 3	4	
15	1	52	1000000		2	53	3	45	1	48	4	4	
16	3	50			1	52		49	3	47	î	4	
17	5	50 52	100 01 201120		3	52	4 5	48	0		0	1,	
18	3	54	000		2	53	4	50			ő		
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	0000		

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Frequency Distribution of Width of Nose

Width of nose in mm.		Male		Fen	nale
width of nose in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
	ADULTS (AGE	20 то 59 ч	EARS)		
29 31 33 35 37 39 41 43 45 47	5 14 23 18 6 1	1 0 2 2 2 4 3 3 2	3 10 15 12 9 4 1	2 10 24 36 17 9 0	2 4 6 10 3 2
Mean S.D P.E C. of V No.	$39 \cdot 9$ $\pm 2 \cdot 41$ $\pm 0 \cdot 20$ $6 \cdot 04$ 68	$38 \cdot 2 \\ \pm 3 \cdot 82 \\ \pm \\ 9 \cdot 99 \\ 17$	$ \begin{array}{r} 38 \cdot 6 \\ \pm 2 \cdot 79 \\ \pm 0 \cdot 26 \\ 7 \cdot 23 \\ 54 \end{array} $	$35.3 \\ \pm 2.46 \\ \pm 0.17 \\ 6.97 \\ 99$	$34.5 \\ \pm 2.57 \\ \pm 0.33 \\ 7.45 \\ 27$
ADV	ULTS (AGED 6	0 YEARS ANI	O OVER)		
Mean	$39 \cdot 9$ $\pm 2 \cdot 64$ $\pm 0 \cdot 48$ $6 \cdot 61$ 14	43.8	39.5	$37 \cdot 2$ $\pm 2 \cdot 05$ $\pm 0 \cdot 36$ $5 \cdot 50$ 15	$ \begin{array}{r} 39.3 \\ \pm 3.46 \\ \pm 0.78 \\ 8.80 \\ 9 \end{array} $

Distribution of Width of Nose According to Age

			Male					Female					
Age 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	35	
11 12	0 2	33	to cases of		1	34 31			A SHELL		1	3	
13	8	32			2	33	3	32			2	3	
14	2	33			3	32	1	35			3	3	
5	1	36			2	35	3	34	1	38	4	3	
16	3	36			1	38	4	35	3	34	1	3	
7	5	37			3	34	5	35			0		
8	3	38			2	35	4	36			0		
19	3	38	****		3	36	8	35			2	3	
20–59	68	39.9	17	38.2	54	38.6	99	35.3	27	34.5			
60++06	14	$39 \cdot 9$	7	43.8	4	39.5	15	$37 \cdot 2$	9	39.3			

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Frequency Distribution of Nasal Index

Index		Male		Fem	ale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
AD	ULTS (AGED	20 TO 59 YEAR	RS)		
15. 150. 155. 150. 150. 170. 175. 180. 1	9 13 16 19 9	1 0 0 3 3 3 5 4 1	10 10 14 16 3 0	3 16 26 34 15 2	1 1 3 10 9 0
Mean Em. V N	72·9 ±6·64 ±0·54 9·11 68	$ \begin{array}{r} 69 \cdot 6 \\ \pm 8 \cdot 07 \\ \pm 1 \cdot 32 \\ 11 \cdot 58 \\ 17 \end{array} $	$\begin{array}{c} 71 \cdot 6 \\ \pm 6 \cdot 59 \\ \pm 0 \cdot 60 \\ 9 \cdot 20 \\ 54 \end{array}$	$70 \cdot 0$ $\pm 6 \cdot 19$ $\pm 0 \cdot 42$ $8 \cdot 84$ 99	$69 \cdot 2 \\ \pm 7 \cdot 49 \\ \pm 0 \cdot 97 \\ 10 \cdot 83 \\ 27$
ADU	LTS (AGED 6) YEARS AND	over)		
Mean σ E _m V N	$ \begin{array}{c} 69 \cdot 9 \\ \pm 6 \cdot 74 \\ \pm 1 \cdot 21 \\ 9 \cdot 65 \\ 14 \end{array} $	79	70.2	$ \begin{array}{c c} 71 \cdot 3 \\ \pm 6 \cdot 55 \\ \pm 1 \cdot 14 \\ 9 \cdot 18 \\ 15 \end{array} $	75·9 ±8·75 ±1·97 11·53

Distribution of Nasal Index According to Age

				Male					F	emale		
Age in years		sland lake		Gods lake		xford Iouse		sland lake		Gods lake		xford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	2 0 2 8 2 1 3 5 3 3	63·9 64·7 66·8 67·1 69·2 71·6 70·1 69·9 74·7			1 1 1 2 3 2 1 3 2 3 2 3	$67 \cdot 4$ $77 \cdot 3$ $66 \cdot 0$ $72 \cdot 3$ $69 \cdot 6$ $65 \cdot 1$ $73 \cdot 1$ $64 \cdot 9$ $65 \cdot 9$ $71 \cdot 8$	3 1 3 4 5 4 8	72·9 76·1 75·1 73·5 73·8 71·7 72·7	1 3	79·2 72·5	1 1 1 2 3 4 1 0 0 2	78·1 62·5 64·6 69·6 66·3 69·9 81·4
20–59 60+	68 14	72·9 69·8	17 7	69·6 79·0	54 4	$\begin{array}{c} 71 \cdot 6 \\ 70 \cdot 2 \end{array}$	99 15	70·0 71·3	27 9	69·2 75·9	3 5 5 5	

Frequency Distribution of Length of Mouth

Length of mouth in mm.		Male		Fen	nale
Dength of mouth in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
A	ADULTS (AGEI	20 то 59 ч	EARS)		
36. 39. 42. 45. 48. 51. 54. 57. 60. 33. 66. 69. 72. Mean. 7. Em. V.	3 8 17 17 16 6 0 1 60.6 ±4.16 ±0.34 6.86 68	$\begin{array}{c} 2\\2\\8\\4\\0\\0\\1\\\hline \\\hline \\65\cdot 6\\\pm 6\cdot 62\\\pm 1\cdot 08\\\hline \\10\cdot 09\\17\\\end{array}$	2 7 10 25 9 2 2 	$\begin{array}{c} 2\\0\\0\\0\\6\\6\\18\\29\\27\\15\\1\\1\\1\\1\\\end{array}$	2 5 11 7 1 1 1
ADŢ	LTS (AGED 6	0 YEARS AND	over)		
Mean. Em. V	$58 \cdot 2$ $\pm 3 \cdot 42$ $\pm 0 \cdot 64$ $5 \cdot 88$ 13	70.0	63.5	$\begin{array}{c} 56.5 \\ \pm 4.47 \\ \pm 0.75 \\ 7.92 \\ 16 \end{array}$	$63 \cdot 3 \\ \pm 3 \cdot 40 \\ \pm 0 \cdot 76 \\ 5 \cdot 37 \\ 9$

Distribution of Length of Mouth According to Age

				Male					F	emale		
Age in years		sland lake		Gods lake		xford House		sland lake		Gods lake		xford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10	2	47.0			1	48.0					1	50
11	0 2	52.0			1	$53 \cdot 0 \\ 57 \cdot 0$					1	52 51
12 13	8	$52.0 \\ 52.3$			2	53.0	4	49.8			2	50
14	2	$53 \cdot 0$			3	50.0	1	49.0	10000		3	50
15	1	$57 \cdot 0$			2	54.0	4	53.0	1	55.0	4	50
16	3	56.0			1	56.0	4	$52 \cdot 0$	3	56.0	1	45
17	5	55.4	****		3	$54 \cdot 0$	5	$53 \cdot 4$			0	
18	3	60.0			2	59.0	5	56.0			0	
19	3	57.0			3	$56 \cdot 0$	8	53.9			2	52
20–59	68	60.6	17	65 · 6	55	60.1	100	55.8	27	58.3		
60+	13	$58 \cdot 2$	7	70.0	4	$63 \cdot 5$	16	$56 \cdot 5$	9	$63 \cdot 3$		

Frequency Distribution of Length of Ear

		Male		Fer	nale
Length of ear in mm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
	ADULTS (AGEI	20 то 59 ч	EARS)		1
				1	
				0	
				0	
				0	
				0	
	1			0	
*************************	0	1		$\frac{14}{27}$	
	9	î	5	31	
	12	7	8	15	
	18	2	14	4	
· · · · · · · · · · · · · · · · · · ·	16 10	4 2	13 11		
			4		
an	65.9	65.3	67.6	58.7	59.
	± 4.30	± 4.05	± 4.16	± 4.16	
• • • • • • • • • • • • • • • • • • • •	± 0.35	± 0.66	± 0.38	± 0.29	
	6·53 67	$6.21 \\ 17$	$6 \cdot 15 \\ 55$	$7.09 \\ 92$	
	07	17	99	92	1
AD	ULTS (AGED (00 YEARS AND	o over)		
an	68.5	73.0	69.0	63.0	69.
au	±3·30	10-0	03.0	± 4.24	
· · · · · · · · · · · · · · · · · · ·	± 0.62			± 0.76	
	4.81			6.73 14	

Distribution of Length of Ear According to Age

			1	Male			Female						
Age Island lake	Gods lake			Oxford House		Island lake		Gods lake	Oxford House				
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mea	
)	2	59.0			1	59.0			,		0		
• • • • • • • • • • • • • • • • • • •	0 2	59.0	1		1	$72 \cdot 0 \\ 61 \cdot 0$			-	To the Assessment of the last	0		
• • • • • • • • • • • • • • • • • • •	7	55.4			2	64.0	3	56.0	10000		0		
· · · · · · · · · · · · · · · · · · ·	2	58.0			3	$62 \cdot 0$	1	56.0					
	1	60.0			2	$66 \cdot 0$	4	56.8					
	3	$62 \cdot 0$			1	$62 \cdot 0$	3	60.0	2	57.0	0		
	5	$62 \cdot 6$			3	$61 \cdot 0$	4	$56 \cdot 0$			0		
	3	$62 \cdot 0$			2	$62 \cdot 0$	3	$60 \cdot 0$			0		
	3	$62 \cdot 0$			3	$65 \cdot 0$	7	$56 \cdot 7$			0		
-59	67	65.9	17	65.3	55	67.6	92	58.7	6	59.0			
+	13	68.5	7	73.0	4	69.0	14	63.0	2	69.0			

Frequency Distribution of Width of Eur

Vidth of ear in mm.		Female			
width of ear in mm.	Island	Gods	Oxford	Island	Gods
	lake	lake	House	lake	lake

29. 31. 33. 35. 37. 39.	1 7 15 24 14 3 3	3 5 6 2 1	1 6 10 23 9 6	4 25 27 27 27 9	1 3 2
Meanσ σ Ε _m V N	$35.4 \\ \pm 2.50 \\ \pm 0.21 \\ 7.07 \\ 67$	34·7 ±2·18 ±0·36 6·27 17	35·4 ±2·35 ±0·21 6·64 55	$33.8 \pm 2.11 \pm 0.15 6.25 92$	31.8

ADULTS (AGED 60 YEARS AND OVER)

Mean	35.8	37	36.5	34.5	34
σ E _m	$\pm 2.81 \\ \pm 0.53$			$\pm 2.48 \\ \pm 0.45$	
V N	$7.85 \\ 13$	7	4	7·18 14	2

Distribution of Width of Ear According to Age

			1	Male					$\mathbf{F}\epsilon$	emale		
Age in years		sland lake		Gods lake		xford louse		sland lake		dods lake		xford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mear
0	2	34			1	36					0	
1	0				1	36			1		0	
2	7	36			1	33					0	
3		33			2 3	36	3	32			0	
<u>4</u>	2	35				33	4	36		******	0	
5	1	32			2	32 36	3	32			0	
<u>3</u>	3 5	35	****		1			33	2	$34 \cdot 5$	0	
7		34			3	33	4	34			0	
3 <mark> </mark>	3	36			2	32	3	33			0	
)	3	37			3	35	7	34			0	
)–59	67	35.4	17	34.7	55	35.3	92	33.8	6	31.8		
)+	13	35.8	7	37.0	4	36.5	14	34.5	2	34.0		

Frequency Distribution of Ear Index

To Jon		Female			
Index	Island	Gods	Oxford	Island	Gods
	lake	lake	House	lake	lake

ADULTS (AGED 20 TO 59 YEARS)

43. 46. 49. 52. 55. 58. 61. 64. 67. 100.	5 12 22 22 22 4 2	3 4 5 3 0 2	3 9 12 15 11 4 0	6 16 23 27 12 7 0	1 3 0 2
Mean σ Em V N	53·6 ±3·38 ±0·28 6·30 67	52.8 ± 4.42 ± 0.72 8.37 17	$52 \cdot 1$ $\pm 4 \cdot 31$ $\pm 0 \cdot 39$ $8 \cdot 26$ 55	$57 \cdot 9$ $\pm 5 \cdot 98$ $\pm 0 \cdot 42$ $10 \cdot 32$ 92	54.5

ADULTS (AGED 60 YEARS AND OVER)

Mean	52 · 1	50.8	52.7	54.7	49.4
E _m				±0.73	
V N	$6.54 \\ 13$	7	4	7·39 14	······ <u>·</u> ···

Distribution of Ear Index According to Age

			1	Male					F	emale		
Age in years		sland lake		Gods lake		xford Iouse		sland lake		Gods lake		xford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mear
0	2	56.8			1	61.0					0	
1	0 2				1	50.0					0	
2	2	$60 \cdot 2$			1	$54 \cdot 1$					0	
3	7	$60 \cdot 1$			2	56.0	3	$56 \cdot 6$			0	
1	2	$59 \cdot 5$			3	$52 \cdot 7$	1	$64 \cdot 3$			0	
5 	1	$53 \cdot 3$			2	47.7	4	$56 \cdot 4$			0	
8	3	$56 \cdot 4$			1	58.1	3	$55 \cdot 5$	2	60.6	0	
	5	54.0			3	$54 \cdot 5$	4	60.5			0	
	3	57.9			2	51.6	3	55.6			0	
)	3	60.3			3	53.6	7	60.0			0	
-59	67	53.6	17	52.8	55	52 · 1	92	57.9	6	54.5		
+		$52 \cdot 1$	7	50.8	4	52.7	14	54.7	2	49.4		

Frequency Distribution of Length of Hand

Length of hand in mm.		Male		Fen	nale
Dengen of hand in min.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
	ADULTS (AGEI	20 то 59 ч	EARS)		
165. 170. 175. 180. 185. 190. 195. 200. 205.	3 7 13 18 14 7 4	1 2 3 4 5 2	2 4 10 18 12 8 0 1	6 10 32 27 16 4 2 1	1 4 9 11 2
Mean σ Εm V.	$egin{array}{c} 192 \\ \pm 7 \cdot 43 \\ \pm 0 \cdot 62 \\ 3 \cdot 86 \\ 66 \end{array}$	$egin{array}{c} 192 \\ \pm 6.96 \\ \pm 1.14 \\ 3.63 \\ 17 \end{array}$	$ \begin{array}{r} 193 \\ \pm 6.84 \\ \pm 0.62 \\ 3.55 \\ 55 \end{array} $	$ \begin{array}{r} 180 \\ \pm 6.75 \\ \pm 0.46 \\ 3.75 \\ 98 \end{array} $	$ \begin{array}{r} 179 \\ \pm 4.71 \\ \pm 0.61 \\ 2.64 \\ 27 \end{array} $
ADI	ULTS (AGED 6	O YEARS AND	over)		
Mean σ Ε _m V N	$\begin{array}{c} 191 \\ \pm 8 \cdot 28 \\ \pm 1 \cdot 49 \\ 4 \cdot 33 \\ 14 \end{array}$	C 1 2 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	196	$ \begin{array}{c} 181 \\ \pm 8.93 \\ \pm 1.74 \\ 4.94 \\ 12 \end{array} $	181 ±6·82 ±1·63 3·76 8

Distribution of Length of Hand According to Age

				Male					F	emale		
Age in years		sland lake		Gods lake		xford Iouse		sland lake		Gods lake		Oxford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
0	2	148			1	157					1	15
1	0				1	146					1	1.
2	2	159			1	167					1	1
3	7	166	A 47.4120		2	167	3	168			2	1
4	2	166			3	165	1	156			3	1
5	1	182			2	189	4	179	1	187	4	1
3 ,	3	178	****		1	190	4	180	3	170	1	1
7 	5	193			3	183	5	182			0	
3	4	193			2	183	3	176			0	
9	3	187			3	195	8	180	****		2	1
)–59	66	192	17	192	55	193	98	180	27	179		
)+	14	191	7	197	4	196	12	181	8	181		

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Frequency Distribution of Width of Hand

Width of hand in mm.		Male		Fen	nale
width of hand in mm.	Island lake	Gods lake	Oxford House	Island lake	Gods lake
	ADULTS (AGE	20 то 59 ч	EARS)		
70	1 5 12 26 13 9	1 2 7 4 3	1 4 12 13 19 4 2	5 18 26 36 10 2 1	1 0 10 8 7 1
Mean	$ \begin{array}{r} 86 \cdot 0 \\ \pm 3 \cdot 49 \\ \pm 0 \cdot 29 \\ 4 \cdot 05 \\ 66 \end{array} $	$ \begin{array}{r} 87 \cdot 0 \\ \pm 3 \cdot 24 \\ \pm 0 \cdot 53 \\ \hline 3 \cdot 73 \\ 17 \end{array} $	$90 \cdot 0$ $\pm 3 \cdot 80$ $\pm 0 \cdot 35$ $4 \cdot 24$ 55	78·0 ±3·50 ±0·24 4·48 98	$ \begin{array}{c} 80 \cdot 0 \\ \pm 3 \cdot 13 \\ \pm 0 \cdot 41 \\ \hline 3 \cdot 94 \\ 27 \end{array} $
ADI	ULTS (AGED 6	0 YEARS AND	O OVER)		
Mean. σ. Εm. V. N.	$88.0 \\ \pm 3.72 \\ \pm 0.67 \\ 4.25 \\ 14$	89.0	89.0	$79 \cdot 0$ $\pm 3 \cdot 77$ $\pm 0 \cdot 73$ $4 \cdot 78$ 12	$\begin{array}{c} 82 \cdot 0 \\ \pm 1 \cdot 45 \\ \pm 0 \cdot 35 \\ 1 \cdot 77 \\ 8 \end{array}$

Distribution of Width of Hand According to Age

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

Frequency Distribution of Hand Index

Index		Male		Fen	nale
Index	Island lake	Gods lake	Oxford House	Island lake	Gods lake
	ADULTS (AGE	р 20 то 59 ч	EARS)		
37. 39. 41. 43. 45. 47. 49. 51.	1 3 26 26 26 9 1	1 5 7 4	7 24 14 9	1 6 21 42 21 7	1 3 8 12 2 1
Mean σ Em V N	$\begin{array}{c} 44.8 \\ \pm 1.76 \\ \pm 0.15 \\ 3.94 \\ 66 \end{array}$	$\begin{array}{c} 45 \cdot 1 \\ \pm 1 \cdot 71 \\ \pm 0 \cdot 28 \\ 3 \cdot 79 \\ 17 \end{array}$	$\begin{array}{c} 46.5 \\ \pm 1.94 \\ \pm 0.18 \\ 4.17 \\ 55 \end{array}$	$\begin{array}{c} 43.5 \\ \pm 2.05 \\ \pm 0.14 \\ 4.72 \\ 98 \end{array}$	$\begin{array}{c} 44.5 \\ \pm 2.06 \\ \pm 0.27 \\ 4.63 \\ 27 \end{array}$

ADULTS (AGED 60 YEARS AND OVER)

Mean	45.6	45.1	45.2	43.8	45.0
E _m .	$\pm 2.33 \\ \pm 0.42$			$\pm 2.29 \\ \pm 0.45$	$\begin{array}{l} \pm1\cdot32 \\ \pm0\cdot32 \end{array}$
V	5.10	7		$\frac{5\cdot 21}{12}$	2.94

Distribution of Hand Index According to Age

]	Male					F	emale		
Age in years		sland lake		Gods lake		xford House		sland lake		Gods lake		xford House
	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
10. 11. 12. 13. 14. 15. 16. 17.	2 0 2 7 2 1 3 5 4 3	43·6 			1 1 1 2 3 2 1 3 2 3	42·0 43·8 42·5 46·0 44·9 46·4 44·7 45·1 44·8	3 1 4 4 5 3 8	41·8 46·2 43·2 42·3 44·0 42·2	1 3	41·2 45·3	1 1 1 2 3 4 1 0 0 2	41. 41. 43. 40. 42. 42. 44.
20–59 30+	66 14	44·8 45·6	17 7	45·1 45·1	55 4	46·5 45·2	98 12	43·5 43·8	27 8	44·5 45·0		

APPENDICES

APPENDIX I
Particulars of Island Lake Men

							Hea	d			No	ose		E	ar	th)	На	nd	
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 iris²
							AGE	D 20	то 59	9 YE	ARS								
2 5 7 8 9	21 45 26 30 34	1685 1776 1621 1707 1721	1808 1866 1738 1854 1847	929 869 891	197·0 193·0 190·0 193·0 196·0	$163 \cdot 0$ $156 \cdot 0$ $144 \cdot 0$	$149 \cdot 0$ $143 \cdot 0$ $142 \cdot 0$	112 111 107 101 107	123 131 116 125 126	177 185 177 183 199	57 62 50 57 61	39 43 40 42 42	57 66 58 65 62	66 70 64 64 66	36 38 37 35 37	18 14 17 11 14	192 200 184 205 201	88 93 79 89 93	D M D D
10 15 16 17 18	30 45 45 42 35	1583 1683 1672 1657 1657	1732 1878 1796 1765 1822	911 854 876	182·0 198·0 185·0 202·0 193·0	$153 \cdot 0 \\ 157 \cdot 0 \\ 163 \cdot 0$	$151 \cdot 0$ $149 \cdot 0$ $149 \cdot 0$	96 104 95 106 105	121 105 117 121 121	179 188 178 190 175	59 64 56 51 51	38 40 42 44 41	53 68 60 64 56	67 67 72 67 62	38 40 41 33 36	15 17 12 16 17	188 200 185 194 187	86 82 86 90 91	D D D D
20 23 24 29 30	42 35 26 45 40	1648 1714 1736 1764 1736	1776 1807 1817 1892 1837	887 897 930	198·0 197·0 190·0 194·0 201·0	$155 \cdot 0$ $153 \cdot 0$ $158 \cdot 0$	$142 \cdot 0 \\ 144 \cdot 0 \\ 157 \cdot 0$	107 100 106 108 107	123 125 122 135 132	191 179 185 201 190	55 55 52 61 52	42 42 40 47 43	59 58 60 64 61	71 69 71 70 70	36 37 37 34 37	16 14 13 16 19	187 192 192 203 201	87 87 91 90 90	D D D D
32 33 34 35 36	35 50 26 28 26	1848 1723 1746 1681 1739	1912 1825 1802 1772 1852	917 942 902	$207 \cdot 0$ $205 \cdot 0$ $194 \cdot 0$ $204 \cdot 0$ $195 \cdot 0$	$151 \cdot 0$ $159 \cdot 0$ $161 \cdot 0$	$145 \cdot 5 \\ 150 \cdot 0 \\ 151 \cdot 0$	113 103 108 — 102	118 119 123 122 133	188 179 188 181 190	55 51 55 51 58	43 45 40 41 42	58 64 57 63 59	66 73 65 68 66	36 38 37 39 35	17 11 15 15 19	198 199 190 192 191	88 86 87 91 86	Bl-D D-M D-M D-M D
37 38 40 43 45	21 42 30 24 24	1777 1679 1703 1759 1742	1817 1797 1764 — 1897	$910 \\ 904 \\ 965$	183 · 0 203 · 0 196 · 0 201 · 0 201 · 0	$166 \cdot 0 \\ 152 \cdot 0 \\ 164 \cdot 0$	$157 \cdot 0$ $146 \cdot 0$ $154 \cdot 0$	100 110 107 105 103	112 126 122 128 122	168 197 176 193 181	52 58 54 57 55	36 41 40 37 41	54 60 58 55 54	63 64 66 73 72	35 35 33 41 37	14 17 22 18 19	195 199 191 — 195	84 91 85 — 87	D Gr D-M M M
47 48 49 50 51	31 28 32 30 28	1790 1642 1688 1632 1737	1855 1720 1793 1737 1825	870 883 871	$194 \cdot 0$ $195 \cdot 0$ $185 \cdot 0$ $192 \cdot 0$ $197 \cdot 0$	$163 \cdot 0$ $149 \cdot 0$ $153 \cdot 0$	$149 \cdot 0$ $143 \cdot 0$ $145 \cdot 5$	99 104 100 98 101	127 128 119 122 124	189 190 179 180 182	57 51 49 54 55	39 40 40 42 41	56 55 56 62 60	70 68 65 60 71	39 35 35 32 37	15 21 16 18 10	202 179 192 184 191	89 84 84 80 84	Bl-D D-M M D-M
52 53 56 59 60	24 40 36 35 40	1678 1605 1652 1679 1698	1789 1720 1777 1817 1822	875 841 896	$193 \cdot 0$ $189 \cdot 0$ $195 \cdot 0$ $196 \cdot 5$ $192 \cdot 0$	$150 \cdot 0$ $158 \cdot 0$ $157 \cdot 0$	$143 \cdot 0 \\ 148 \cdot 0 \\ 148 \cdot 0$	101 96 102 104 103	127 125 132 126 132	189 182 186 190 190	52 60 54 52 63	40 38 41 40 39	51 57 65 65 63	69 68 65 65 64	36 35 41 36 35	15 13 20 13 17	194 184 189 199 196	83 80 85 88 86	Bl-D M D — D-M
63 65 66 67 68	50 21 23 21 26	$1742 \\ 1706 \\ 1717 \\ 1686 \\ 1732$	1847 1829 1837 1807 1818	900 887 904	191 · 0 195 · 0 205 · 0 197 · 0 201 · 0	$165 \cdot 0 \\ 160 \cdot 0 \\ 153 \cdot 0$	$153 \cdot 0$ $153 \cdot 0$ $143 \cdot 0$	104 106 116 107 105	126 126 133 127 125	186 193 187 174 176	52 56 55 54 50	40 39 37 36 38	60 57 58 59 63	70 65 60 61 65	36 36 33 34 34	21 16 23 19 22	196 194 197 197 191	90 88 89 89 87	M M D D
69 70 73 75 76	26 34 55 35 28	1743 1726 — 1666 1752	1967 1822 — 1804 1824	940 888	204.0	$163 \cdot 5 \\ 158 \cdot 0 \\ 155 \cdot 0$	$153 \cdot 0 \\ 153 \cdot 5$	106 108 109 103 113	116 126 124 132 126	176 194 192 197 183	54 54 56 52 50	37 40 41 37 40	61 65 68 59 63	61 69 73 63 66	35 35 36 34 31	15 18 20 19 15	208 194 187 197 194	88 86 83 85 87	D-M D-M D-M D

APPENDIX I (Continued)

Particulars of Island Lake Men (Continued)

							Hea	d			No	ose		E	ar	th)	На	nd	
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 iris²
						AG	ED 20	то 59	9 YEA	RS-	Con	tinu	ied				-		-
78 80 81 83 84	20 50 20 28 50	1635 1558 1689 1721	1686 1727 1827 1814	846 864	$191 \cdot 0$ $178 \cdot 0$ $210 \cdot 0$	155·0 156·0 151·5 161·0 149·0	$148 \cdot 0$ $141 \cdot 5$ $153 \cdot 5$	106 103 98 116 108	115 119 129 127 135	172 181 188 186 199	47 53 57 53 58	39 37 37 41 36	60 57 54 72 67	61 62 60 56 73	37 33 33 32 34	16 18 16 18 18	176 181 189 194 192	83 84 87 93 92	D D-M D D-M
85 87 90 91 92	40 25 42 40 24	1730 1682 1795	1818 1787 1897		$190 \cdot 0$ $193 \cdot 5$ $198 \cdot 0$	162·5 147·0 155·5 156·0 156·0	$140.5 \\ 144.0 \\ 149.0$	107 97 103 105 109	139 123 123 125 125	197 177 194 177 178	60 52 53 57 54	43 42 41 39 43	65 59 61 68 62	66 62 62 69 61	32 32 34 36 35	17 17 17 19 19	207 195 189 182 209	92 85 85 87 86	M D-M D D D-M
93 94 95 96 97	45 24 48 26 24	1686 1689 1694 1713	1857 1765 1797 1844	879 882	$202 \cdot 0$ $197 \cdot 0$ $198 \cdot 0$	154·0 152·0 156·5 147·5 155·0	$142.5 \\ 148.0 \\ 143.0$	107 107 102 101 105	120 110 126 128 127	182 173 184 184 191	52 47 60 60 55	39 37 42 36 39	64 59 67 59 61	72 62 69 69 61	33 32 37 34 35	15 16 10 15 16	188 184 179 184 189	85 86 84 79 84	
99 104 105 106 107	30 26 34 23 28	1730 1719 — 1569 1749	1852 1823 — 1702 1756	924 - 854	$204 \cdot 0$ $187 \cdot 0$ $192 \cdot 0$	$158 \cdot 0$ $152 \cdot 5$ $144 \cdot 0$ $149 \cdot 5$ $157 \cdot 0$	$141 \cdot 0$ $138 \cdot 0$ $139 \cdot 5$	103 101 92 107 106	132 137 131 120 124	197 187 172 168 186	61 56 59 48 55	38 39 38 36 38	61 65 62 53 61	61 66 68 51 68	33 35 34 30 37	15 15 20 9 18	200 199 192 185 197	87 86 77 83 86	D M M-L D D
108 109 110	26 32 26	1681 1544 1680	1734 1703 1828	824	189.0	158·0 148·0 154·0	144.5	110 101 110	119 128 118	179 190 169	61 58 52	38 40 39	63 63 60	63 67 —	35 32 —	17 18 19	188 186 —	85 81 —	D D D
							AGED	60 3	EARS	ANI	70 0	ER							
4 21 25 26 31	60 60 65 60	1705 — 1653 1601 1592	1857 — 1752 1727 1687	868 809	198·0 194·0 198·0	157·0 158·0 164·0 162·0 155·0	$155 \cdot 0$ $152 \cdot 0$ $153 \cdot 0$	106 105 102 108 102	121 120 145 133 128	186 176 204 185 186	57 57 65 57 61	43 43 35 41 40	60 55 56 59 54	71 71 69 69	41 -40 33 35	20 19 20 19 19	200 193 187 191 173	89 94 89 86 83	D M-L D D
39 46 57 62 64	70 70 65 60 60	1700 1598 1625 	1772 1712 1757		$196 \cdot 0$ $195 \cdot 0$ $207 \cdot 0$	163 · 0 150 · 0 159 · 0 151 · 0 155 · 0	$149 \cdot 0$ $146 \cdot 0$ $147 \cdot 0$	102 103 106 105 99	135 116 126 123 124	193 191 192 179 182	57 52 55 54 57	42 36 39 44 38	58 55 55 56	73 75 67 67 64	40 38 35 35 33	23 - 20 16	201 181 188 191 199	91 82 83 85 82	D-M D-M Bl-D D
71 74 77 86	65 60 60 60	1744 1708 — 1658	1872 1842 — 1742	880	$200.0 \\ 194.0$	154·0 159·5 156·0 155·5	$\substack{151 \cdot 0 \\ 147 \cdot 0}$	102 105 100 107	133 133 127 123	197 179 178 182	63 57 59 56	41 37 40 40	62 64 61 64	67 66 66 69	34 35 32 34	22 24 18 18	193 203 192 182	86 90 90 91	D D-M D-M

¹Serial 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.

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

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APPENDIX II

Particulars of Gods Lake Men¹

		Head	Nose		Ear	th)	Hand	
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

AGED 20 TO 59 YEARS

_	_			-						-					_	_				
1 3 4 8 9	35 30 40 50 30	1689 1773 — 1709 1756	1837 1889 — 1790 1822	921 828	$193 \cdot 0$ $202 \cdot 0$ $191 \cdot 0$	$152 \cdot 5$ $151 \cdot 5$ $148 \cdot 0$	145·5 141·0 151·5 148·0 137·0	108 108 103	126 134 129 120 127	185 197 171 186 189	55 62 57 52 56	39 30 43 41 34	59 62 64 62 60	62 71 69 67 69	33 34 36 32 35	19 14 18 18 17	190 199 188 193 192	85 87 87 88 80	D	T G G P G
12 13 14 15 16	28 50 45 45 30	1682 1754 1705 1782 1696	1777 1872 1875 1861 1807	902 909 953	$197 \cdot 0$ $203 \cdot 0$ $192 \cdot 0$	$154 \cdot 0$ $153 \cdot 5$ $155 \cdot 0$	$138 \cdot 0$ $150 \cdot 0$ $148 \cdot 0$ $144 \cdot 0$ $139 \cdot 0$	103 104 108	122 126 131 133 131	178 188 195 197 193	53 57 59 59 55	38 44 43 38 36	61 65 72 62 55	68 62 64 69 63	35 33 39 38 32	17 16 22 19 18	184 196 204 194 189	83 91 87 89 84	D-M D-D	P G G P P
17 18 20 21 22	50 40 27 21 45	1682 1754 1670	1765 1877 1750	930	$195 \cdot 0$ $192 \cdot 5$ $194 \cdot 5$	$154 \cdot 0$ $158 \cdot 0$ $153 \cdot 5$	150·0 151·0 149·0 144·0 156·0	107 105·5	124 137 123 126 122	188 191 177 190 189	52 57 53 55 49	40 41 34 38 39	62 65 59 62 64	64 73 64 62 65	34 35 35 31 37	21 21 18 16 19	187 203 179 195 198	89 89 85 86 92	D-M D-M	T ² P T ?
23 24	20 22	=	=	=		154·5 153·5	145·5 135·5	111 107	127 120	187 174	53 53	36 38	54 60	57 61	35 33	17 14	198 183	93 86	D D	?

AGED 60 YEARS AND OVER

2 5 6 7 10	65 60 65 60 60	1748 1799 1746 1640	1937 1890	924 905	$194 \cdot 0$ $207 \cdot 0$ $206 \cdot 5$	$159 \cdot 5$ $161 \cdot 0$ $158 \cdot 0$	$149 \cdot 0$ $148 \cdot 0$ $156 \cdot 0$ $154 \cdot 0$ $155 \cdot 0$	107 102 110	$125 \\ 135 \\ 128$	181 198 197	48 47 44	71	75 73 79 75 75	38 39	12 18 26 20 22	209 187 220 198 183	96 96	D-M D	G P T G G³
11 19	60 60	1743 1636					151·0 146·0					63 69	69 65	32 37	22 21	201 184	93 81	Gr M	G 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

							Hea	d			N	ose		E	ar	th)	Ha	nd	
Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic	Frontal minimum	Menton- nasion	Menton- crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width	Colour of iris
							AG	ED 20	то 59	YE/	RS								
1 2 4 5 6	45 35 25	1715 1700 1616 1757 1762	1818 1755 1833	858 854 845 857 900	198·5 190·5 198·0 208·5 202·0	$156 \cdot 0$ $147 \cdot 0$ $146 \cdot 0$ $137 \cdot 0$ $143 \cdot 0$	$153 \cdot 0$ $153 \cdot 5$ $141 \cdot 0$ $137 \cdot 0$ $138 \cdot 0$	$104 \cdot 0$ $101 \cdot 0$ $101 \cdot 0$ $105 \cdot 5$ $102 \cdot 0$	129 119 123 118 127	192 179 181 182 177	56 52 53	42 40 37 37 39	63 58	71 74 63 60 73	36 39 31 39 32	20 21 21 17 15	204 187 187 193 187	91 91 86 91 92	D-M L L M L
7 8 9 10 11	25 55 35	1762 1853 1672 1789 1777	1885 1810 1870	906 919 867 922 923	$\begin{array}{c} 195 \cdot 0 \\ 206 \cdot 0 \\ 201 \cdot 5 \\ 191 \cdot 0 \\ 208 \cdot 0 \end{array}$	$149 \cdot 0$ $152 \cdot 0$ $155 \cdot 5$ $154 \cdot 0$ $154 \cdot 0$	148·0 146·0 151·5 148·5 145·5	106·0 108·0 102·0 101·0 108·0	120 129 123 130 142	185 188 179 193 204	54 55 61	39 41 45 42 37	$\frac{60}{64}$	66 63 75 69 73	37 34 37 38 33	16 17 20 16 23	204 201 190 194 200	91 96 87	M-L M-L M-L D-M M-L
12 14 15 16 17	28 50 26	1712 1776 1664 1664 1716	1875 1793 1727	876 905 871 858 902	$205 \cdot 0$ $198 \cdot 0$ $194 \cdot 0$ $189 \cdot 0$ $196 \cdot 0$	$157 \cdot 0$ $155 \cdot 0$ $149 \cdot 5$ $147 \cdot 0$ $157 \cdot 0$	$145 \cdot 0$ $147 \cdot 0$ $139 \cdot 0$ $140 \cdot 0$ $155 \cdot 5$	111 · 0 102 · 0 107 · 0 104 · 0 106 · 0	121 109 124 126 129	188 176 188 177 199	55 53 53	38		75 70 70 61 71	36 35 36 32 40	14 13 17 19	195 196 191 184 185	90 94 89 81 90	Gr
18 19 20 21 23	$\frac{25}{26}$ $\frac{40}{40}$	1667 1694 1717 1793	1918 1804	887 836 907	$193 \cdot 0$ $194 \cdot 0$ $198 \cdot 5$ $209 \cdot 0$ $206 \cdot 0$	$157 \cdot 5$ $138 \cdot 5$ $156 \cdot 5$ $151 \cdot 5$ $154 \cdot 5$	141·0 140·5 144·0 149·0 145·5	$ \begin{array}{c} 103 \cdot 0 \\ 95 \cdot 0 \\ 112 \cdot 0 \\ 107 \cdot 0 \\ 101 \cdot 0 \end{array} $	122 111 122 128 121	197 174 178 202 176	54 55 57	36 40	60 62 60 60 62	72 68 63 69 66	34 35 36 33 34	19 12 18 18	188 202 187 198 194	97 90 84 95 91	Gr Gr Gr D-M L
24 25 26 27 28	28 21 42	1749 1773 1753	1863 1807	900 913 906 	$195 \cdot 0$ $194 \cdot 0$ $193 \cdot 0$ $193 \cdot 5$ $196 \cdot 0$	148 · 5 148 · 0 155 · 0 155 · 5 150 · 5	144·5 140·0 145·5 153·0 139·0	105·0 102·0 104·0 104·0 100·0	133 119 122 117 125	193 180 182 179 197	56 53 50			67 67 64 71 65	35 35 36 35 31	13 16 14 21 13	186 197 195 194 192	91 90 91 90 93	L D-M Bl L D
29 30 31 32 33	34 40	1704 1734 1783 1704 1745	1859 1913 1848	884 878 875 871 930	$\begin{array}{c} 192 \cdot 0 \\ 195 \cdot 5 \\ 195 \cdot 0 \\ 189 \cdot 0 \\ 204 \cdot 0 \end{array}$	$150 \cdot 5$ $154 \cdot 0$ $153 \cdot 5$ $153 \cdot 0$ $153 \cdot 0$	139·0 145·5 151·0 149·5 143·0	99·0 112·0 111·0 109·0 110·0	119 120 130 120 118	182 179 197 181 190	54 59 53	35 41 36 37 38	$\frac{65}{62}$ $\frac{63}{63}$	60 64 72 71 66	36 37 36 39 36	14 14 16 20 17	190 200 201 193 195	87 93 92 91 95	D D D-M M M
34 35 36 38 39	35 45	1821 1720 1612	1857	934 888 843	199·0 190·5 191·5 191·0 194·0	153 · 0 151 · 5 155 · 0 151 · 5 147 · 5	143·0 144·0 140·5 143·5 146·5	108·0 112·0 105·0 101·0 97·0	132 128 126 127 124	193 203 193 190 180	57 58	41 40 37 38	65 58 54 56 63	67 66 73 66 65	35 38 33 32 34	19 19 17 17	197 190 179 192 198	89 85 88 86 97	D-M D Gr M D
40 41 42 43 45	28 28 28 28 32				$193 \cdot 0$ $205 \cdot 5$ $197 \cdot 0$ $191 \cdot 0$ $202 \cdot 0$	148·5 153·0 144·0 148·0 159·5	$139 \cdot 0$ $150 \cdot 0$ $136 \cdot 0$ $147 \cdot 0$ $155 \cdot 0$	103·0 109·0 105·0 104·0 113·0	118 120 131 123 119	185 170 196 194 177	53 52 50		56	64 69 68 69 70	35 37 37 36 35	15 17 19 19 16	187 200 211 193 193	89 89 91 88 92	D-M

APPENDIX III (Continued)

Particulars of Oxford House Men (Continued)

_																			
							Head	1			N	Tose		E	ar	th)	Hand		
Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic	Frontal minimum	Menton- nasion	Menton- crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width	Colour of iris
	AGED 20 TO 59 YEARS—Continued																		
47 48 49 50 52 53 55 56 57 59	21 32 21 20 50 20 26 30 — 30 40				182·0 189·0 196·0 190·0 194·0 196·0 197·0 196·0 189·5 195·0 198·0	150·5 151·0 155·0 139·0 145·0 150·0 148·5 151·0 144·0 146·5 151·0 149·0	$\begin{array}{c} 142 \cdot 0 \\ 151 \cdot 0 \\ 143 \cdot 5 \\ 132 \cdot 0 \\ 143 \cdot 0 \\ \hline \\ 141 \cdot 5 \\ 143 \cdot 0 \\ 137 \cdot 5 \\ 148 \cdot 0 \\ 137 \cdot 5 \\ \hline \\ 142 \cdot 0 \\ 147 \cdot 5 \\ \end{array}$	106·0 105·0 105·0 98·0 95·0 98·0 102·0 104·0 98·0 107·0	122 121 119 126 128 117 123 112 132 122		56 50 49 52 58 51 44 53 46 58 57	35 44 34 34 43 38 37 41 40 36 35 43	66 57 52 62 58 56 61 57 61 60	67 73 64 60 66 68 75 65 68 64 70	36 40 35 34 31 33 39 35 34 35 37 35 35	14 18 16 16 18 15 15 19 16 16 16	178 195 193 184 188 195 184 191 192 197 195	85 90 84 87 86 85 85 87 91 84	D M-L M M M-L M-L
61 62 63	40 45 21				$196.5 \\ 195.0 \\ 190.5$	$160.5 \\ 152.0 \\ 146.0$	$151.5 \\ 144.5 \\ 135.0$	$107 \cdot 0$ $107 \cdot 0$ $103 \cdot 0$	121 122 117	182 178 167	53	35 40 39	60	73 66 61	35 38 29	19 16 15	183 191 187	86 93 84	M D D
					,		AGED	60 YE	ARS A	AND	ovi	ER							
3 13 22 44		1589 1692	1786 	804 906	196·0 198·5 189·5 198·0	155·0 159·0 155·5 159·0	145·5 148·5 149·5 149·5	104·0 108·0 112·0 107·0	124 123 128 129	186 189 183 190	60 58	42 38 38 40	62 62	70 67 71 69	36 35 38 37	18 17 22 19	189 185 202 208	85 87 91 91	? D-M D-M Gr

APPENDIX IV Particulars of Island Lake Women¹

							Head				N	Vose		Ear		th)	Hand		
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
							AG	ED 20	то 59	YEA	RS								
3 8 9 10 12	25 30 50	1618 1593 1688 1526 1591	$\frac{1732}{1722}$	826 841 843 790 822	198·0 191·0 182·0 188·0 193·5	$157 \cdot 0$ $154 \cdot 0$ $143 \cdot 0$ $157 \cdot 0$ $156 \cdot 0$	$146 \cdot 0$ $145 \cdot 0$ $136 \cdot 0$ $141 \cdot 0$ $146 \cdot 0$	105·0 106·0 98·0 102·0 107·0	124 118 116 123 119	173 189	48 55 54	37·0 38·0 35·0 36·0	58 55	58 59 63	34 35 31		195 182 175 185	84 73 71 80	D D D D-M
14 16 17 18 19	$\frac{40}{34}$ $\frac{30}{30}$	$\begin{array}{c} 1505 \\ 1625 \end{array}$	$\begin{array}{c} 1657 \\ 1622 \end{array}$	858 793 871 834	$199 \cdot 0$ $188 \cdot 0$ $191 \cdot 0$ $184 \cdot 0$ $190 \cdot 0$	$152 \cdot 0$ $144 \cdot 0$ $145 \cdot 0$ $145 \cdot 0$ $153 \cdot 5$	$143 \cdot 0$ $137 \cdot 0$ $138 \cdot 0$ $137 \cdot 0$ $136 \cdot 0$	110·0 101·0 103·0 95·0 99·0	112 118 127 124 117	167 177 177	53 56 53	37·0 33·0 36·0 40·5 40·0	$\frac{54}{60}$ $\frac{52}{52}$	58 54 59 63	35 35 33 37		181 179 180 176	82 75 77 74	D Bl Bl D Bl
20 21 23 24 26	40 30 35	1589 1543 1508 1561 1622	1627 1667 1652	829 825 2 2 832	$190 \cdot 0$ $194 \cdot 0$ $181 \cdot 5$ $190 \cdot 0$ $197 \cdot 0$	149·0 152·5 149·5 151·0 151·0	135·0 140·0 135·5 138·5 137·0	98·0 105·0 103·0 102·0 96·0	114 112 114 122 124	168 178 185	$\frac{50}{52}$	33·0 37·0 34·0 40·0 40·0	58 59 56	58	32		188 169 175 179 177	75 81 73 79 72	D-M Bl M Bl
27 28 29 30 31	30 28 30	1649 1535 1493 1575 1585	1602 1542 1677	831 831 3	186·0 188·0 184·5 186·0 191·0	154·0 149·0 145·0 149·0 151·0	$138 \cdot 0$ $139 \cdot 0$ $133 \cdot 0$ $139 \cdot 0$ $144 \cdot 0$	$ \begin{array}{r} 100 \cdot 0 \\ 104 \cdot 0 \\ 103 \cdot 0 \\ 97 \cdot 0 \\ 105 \cdot 0 \end{array} $	115 116 115 119 117	176 165 181	52 47 52	35.0 $ 34.0 $ $ 36.0 $ $ 33.0 $ $ 38.0$	56 51 55	60 64 62 64	36 35 37 37	188	184 174 165 176 188	80 70 75 81 78	D-M M D Bl
32 34 35 38 39	$\frac{45}{26}$	1555 1534 1595 1506 1601	$\begin{array}{c} 1617 \\ 1625 \\ 1604 \end{array}$		$185 \cdot 0$ $186 \cdot 0$ $194 \cdot 0$ $179 \cdot 5$ $176 \cdot 0$	152·0 154·5 150·5 150·0 146·0	$141 \cdot 0$ $144 \cdot 0$ $138 \cdot 0$ $136 \cdot 0$ $137 \cdot 0$	101·0 105·0 105·0 97·0 98·0	120 118	173 178 165	52 50 50	34·0 38·0 37·0 35·0 34·0	57 55 51	59 59 64 54 - 60	36 34 37 35 36		168 174 182 175 176	78 76 74 80 78	D-M D-M D D Bl
40 41 43 44 46	28 45 22	1659 1559 1594 1556 1587	$\begin{array}{c} 1677 \\ 1627 \end{array}$		194·0 190·0 194·0 191·0 178·0	151·0 156·0 149·0 150·0 149·0	142·0 139·0 145·0 137·5 138·0	105·0 98·0 101·0 106·0 101·0	123 116 124 117 114	176 173 177	54 52 48	37·0 36·0 37·0 37·0 33·0	54 61 57	67 59 63 60 57	34 34 31 35 37		196 178 179 183 185	83 78 83 82 77	Bl Bl D D-M D
48 49 52 54 55	45 24 40	1606 1650 1552 1520 1567	$\begin{array}{c} 1710 \\ 1622 \end{array}$	 792 843	$186 \cdot 0$ $197 \cdot 0$ $190 \cdot 0$ $185 \cdot 0$ $179 \cdot 0$	$148 \cdot 0$ $157 \cdot 0$ $150 \cdot 0$ $149 \cdot 0$ $149 \cdot 5$	$140 \cdot 0$ $140 \cdot 0$ $136 \cdot 0$ $140 \cdot 0$ $141 \cdot 0$	110·0 106·0 106·0 98·0 103·0	113 118 106 113 117	$170 \\ 165 \\ 169$	50 47 52	$ \begin{array}{r} 39 \cdot 0 \\ 40 \cdot 0 \\ 32 \cdot 5 \\ 35 \cdot 0 \\ 31 \cdot 0 \end{array} $	$\frac{61}{49}$ $\frac{60}{60}$	61 64 58 60 55	34 34 36 33 31	 17 19	179 186 185 176 168	81 80 79 76 73	BI BI BI D BI
61	40 25 35	1595 1468 1529 1507 1546	1626	858 788 814 767 808	181·0 181·0 191·0 183·0 187·0	155·0 151·0 148·0 142·0 153·5	144·0 134·0 134·0 134·0 143·0	104·0 95·0 103·0 99·0 113·0	124 113 115 111 121	174 174 165	45 47 47	35·0 33·0 35·0 36·0 40·0	54 52 55	60 54 57 57 63	32 32 35 32 36	16 17 15 15 16	176 175 177 174 177	80 75 73 78 78	D BI D-M D BI

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.

APPENDIX IV (Continued)

Particulars of Island Lake Women (Continued)

		-					Hea	d			N	lose		E	ar	th)	Hand		
Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum			Menton- crinion	Height		Mouth (length)	Length	Width	Upper lip (length)	Length	Width	Colour of iris
_	1 1					A	GED 20	то 59	YEAL	RS—(Con	tinue	ed	1					
65 67 68 69 70		$\frac{1609}{1636}$	$\frac{1662}{1690}$	845 836 852 875 871	$193 \cdot 0$ $191 \cdot 0$ $186 \cdot 0$ $195 \cdot 0$ $185 \cdot 0$	151·0 157·0 147·5 145·0 149·5	$142 \cdot 0$ $142 \cdot 0$ $137 \cdot 0$ $134 \cdot 0$ $144 \cdot 5$	$108 \cdot 0$ $107 \cdot 0$ $104 \cdot 0$ $102 \cdot 0$ $105 \cdot 0$	118 122 122 126 116	187 181 191	50 49 54	$ \begin{array}{r} 36 \cdot 0 \\ 34 \cdot 0 \\ 32 \cdot 0 \\ 35 \cdot 0 \\ 34 \cdot 0 \end{array} $	52 54 57	64 53 55 54 59	36 35 34 30 33	18 19 19 19 17	182 173 182 190 202	77 80 80 79 78	D D Bl Bl
72 73 74 76 77	45	1649 1552 1496 1576 1601	1687 1587	838 801 815 852 827	189·0 191·0 191·0 188·0 191·0	148·0 149·5 153·0 149·5 154·0	142·0 139·0 143·0 140·0 149·0	$107 \cdot 0$ $109 \cdot 0$ $99 \cdot 0$ $100 \cdot 0$ $112 \cdot 0$	119 123 127 118 117	$\frac{184}{168}$	54 51 47	$ \begin{array}{r} 36 \cdot 0 \\ 38 \cdot 0 \\ 36 \cdot 0 \\ 34 \cdot 0 \\ 33 \cdot 0 \end{array} $	38 59 54	64 60 57 57 59	33 34 32 36 32	16 17 21 21 17	190 180 175 183 187	79 78 82 86 80	D D-M D-M D-M Bl
78 79 80 81	35 36 38 25 28	$\frac{1583}{1586}$	1617 1637 1657 1752 1657	845 852 825 820 854	$174 \cdot 0$ $178 \cdot 0$ $190 \cdot 0$ $198 \cdot 0$ $185 \cdot 0$	$153 \cdot 5$ $152 \cdot 5$ $152 \cdot 0$ $151 \cdot 5$ $145 \cdot 0$	141·0 140·5 143·0 147·5 136·5	98.0 99.0 104.0 110.0 95.0	123 119 116 129 121	191	50 50 49	$ \begin{array}{r} 35 \cdot 0 \\ 33 \cdot 0 \\ 36 \cdot 0 \\ 37 \cdot 0 \\ 34 \cdot 0 \end{array} $	58 38 62	60 58 57 61 61	37 37 35 34 32	18 17 18 22 14	182 176 177 185 184	79 75 81 80 78	D-M D D D-M D-M
83 84 86 87 88	21 42	$1591 \\ 1592$	1652 1702 1697 1572	865 830	$187 \cdot 0$ $187 \cdot 5$ $185 \cdot 0$ $177 \cdot 0$ $199 \cdot 0$	$\begin{array}{c} 152 \cdot 0 \\ 144 \cdot 0 \\ 147 \cdot 5 \\ 146 \cdot 0 \\ 154 \cdot 0 \end{array}$	$145 \cdot 0$ $136 \cdot 0$ $139 \cdot 5$ $139 \cdot 0$ $141 \cdot 0$	$ \begin{array}{c} 105 \cdot 0 \\ 98 \cdot 0 \\ 101 \cdot 0 \\ 99 \cdot 0 \\ 103 \cdot 0 \end{array} $	107 119 117 113 118	168 172 170	49 51 43	$ \begin{array}{r} 35 \cdot 0 \\ 36 \cdot 0 \\ 30 \cdot 0 \\ 32 \cdot 0 \\ 36 \cdot 0 \end{array} $	58 52 50	56 53 56 59 55	32 34 33 31 35	16 18 19 15 17	178 190 172 166 192	79 84 77 75 80	D D-M D D-M D-M
93		1626 1537 1548 1477 1485	1657 1634 1654 1577 1612	888 826 842 796 767	$187 \cdot 0$ $185 \cdot 0$ $186 \cdot 0$ $192 \cdot 0$ $196 \cdot 0$	$153 \cdot 0$ $155 \cdot 0$ $146 \cdot 5$ $150 \cdot 0$ $146 \cdot 0$	$145 \cdot 0$ $141 \cdot 5$ $141 \cdot 0$ $137 \cdot 0$ $137 \cdot 5$	$107 \cdot 0$ $104 \cdot 0$ $107 \cdot 0$ $101 \cdot 0$ $102 \cdot 0$	118 113 119 114 121	169 177 177	51 51 48	$ \begin{array}{c} 32 \cdot 0 \\ 36 \cdot 0 \\ 36 \cdot 0 \\ 32 \cdot 0 \\ 36 \cdot 0 \end{array} $	62 57 56	54 62 57 57 63	31 37 32 33 32	19 17 16 15 22	178 180 183 174 181	83 76 80 76 80	D D-M D-M D-M
96 97 98 99 100.	48 36 35 35	1512 1545 1550 1488 1502	1656	794 823 816 802 806	181 · 0 198 · 0 187 · 0 188 · 0 191 · 0	148·0 152·0 148·5 146·0 153·0	139·0 141·0 141·0 139·0 146·0	100·0 104·0 103·0 105·0 106·0	113 119 115 112 116	$\frac{185}{176}$	$\frac{48}{46}$ $\frac{47}{47}$	$34 \cdot 0$ $36 \cdot 0$ $36 \cdot 0$ $36 \cdot 0$ $37 \cdot 0$	53 58 49	60 54 57 55 60	34 32 30 32 30	15 14 14 18 21	175 178 188 169 181	75 78 79 79 78	D-M D D D D
102. 103. 104. 105. 106.	28 23 50 30	1551		833 777 822 819 834	188 · 0 188 · 0 181 · 0 198 · 0 198 · 0	$152 \cdot 0$ $149 \cdot 0$ $154 \cdot 0$ $153 \cdot 5$ $156 \cdot 0$	$146 \cdot 0$ $133 \cdot 0$ $139 \cdot 0$ $146 \cdot 5$ $144 \cdot 5$	$102 \cdot 0$ $101 \cdot 0$ $99 \cdot 0$ $107 \cdot 0$ $102 \cdot 0$	127 124 117 124 124	187	$54 \\ 51 \\ 52$	$ \begin{array}{r} 37 \cdot 0 \\ 34 \cdot 0 \\ 31 \cdot 0 \\ 37 \cdot 0 \\ 36 \cdot 0 \end{array} $	51 51 59	62 34 58 61 58	32 34 34 36 36	15 15 16 21 21	188 186 187 182 184	89 75 81 78 81	D-M D-M D D-M Bl
108. 109. 110. 111. 112.	24	1639 1666 1623 1573 1713	1787 1662 1628	862 844 870 847 881	196·5 185·5 183·0 186·0 190·0	$158 \cdot 0$ $148 \cdot 0$ $156 \cdot 0$ $149 \cdot 0$ $150 \cdot 0$	$\begin{array}{c} 144 \cdot 0 \\ 136 \cdot 0 \\ 144 \cdot 0 \\ 138 \cdot 0 \\ 139 \cdot 0 \end{array}$	105·0 104·0 98·0 104·0 102·0	126 111 124 121 124	166 186 177	46 53 48	35·0 32·0 36·0 33·0 36·0	57 56 55	60 57 60 59 61	33 35 35 33 33	19 12 17 20 13	184 189 181 178 189	83 72 78 75 76	B ₁ D-M M D D-M
114. 115. 116. 117. 118.	55 36	1550 1557 1598 1643 1568	1687 1672 1742	815 821 831 863 840	189·0 195·0 195·0 199·0 190·0	146·0 151·5 154·5 151·5 155·5	142·0 144·0 145·5 145·0 141·5	101·0 105·0 109·0 111·0 101·0	115 114 114 127 120	174 167 180	49 46 52	$ \begin{array}{r} 35 \cdot 0 \\ 37 \cdot 0 \\ 40 \cdot 0 \\ 44 \cdot 0 \\ 34 \cdot 0 \end{array} $	62 70 60	65 64 60 55 56	32 34 32 31 35	21 19 19 19 19	182 175 175 186 171		BI D-M D-M D-M D

APPENDIX IV (Continued)

Particulars of Island Lake Women (Continued)

_													_					1	
							Head	i			N	Vose		E	ar	th)	H	and	
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
						A	GED 20	то 59	YEAL	as—(Con	itinue	ed						
119. 121. 122. 124. 125.	$\frac{45}{30}$ $\frac{26}{26}$	1608 1516 1594 1617 1512	1637 1717 1615	875 800 836 846 828	192·0 182·0 186·0 190·0 196·0	150·5 148·0 153·5 146·0 154·0	146·5 138·0 144·0 135·5 140·5	$105 \cdot 0$ $101 \cdot 0$ $104 \cdot 0$ $100 \cdot 0$ $107 \cdot 0$	118 114 126 125 114	178 197 181	50 50 52	$35.0 \\ 35.0 \\ 36.0 \\ 35.0 \\ 34.0$	58 57 55	57 65 58 56 56	31 38 30 35 34	18 14 19 17 22	177 181 184 179 171	83 74 80 71 79	D D D Bl D-M
126. 127. 128. 129. 130.	35 55 35	1610 1471 1520 1607 1587	1543 1612 1670	838 784 793 836 820	187·0 183·0 186·0 189·0 174·0	152·0 144·0 148·5 148·0 148·0	143·5 134·5 140·5 133·5 137·5	103·0 99·0 97·0 94·0 97·0	122 118 118 118 118 122	178 174 170 184 168	49 47 51	35 34 34 33 31	57 63 60	57 59 60 60 54	31 33 34 36 32	16 18 21 11 18	182 171 172 176 182	73 78 75	D-M D-M D-M D-M
132. 133. 134. 138. 139.	34 28 40	1664 1634 1609 1610 1538	1767 1722 1702	885 855 835 869 858	$190 \cdot 0$ $192 \cdot 0$ $197 \cdot 0$ $189 \cdot 0$ $183 \cdot 5$	147·0 150·0 150·0 154·0 148·5	140·5 140·5 142·0 146·0 137·5	$103 \cdot 0$ $103 \cdot 0$ $102 \cdot 0$ $101 \cdot 0$ $104 \cdot 0$	126 122 119 121 114	182 177 177 191 179	54 51 53	34 39 30 37 31	60 58 58	60 61 57 67 57	35 36 31 35 34	14 15 15 19 13	185 179 181 182 176	86 81 76 80 76	D-M D-M D D D
							AGED	60 YE	ARS	AND	ov	ER							
2. 6. 7. 15. 22.	60 65 60	1639 1594 1567 1659 1581	1672 1714 1727	838 852 824 852	187·0 195·0 191·0 192·0 192·0	153·0 154·0 158·0 148·0 151·0	143·0 146·0 145·0 142·0 142·0	98·0 100·0 105·0 103·0 101·0	122 108 122 117 124	180 182 194 171 175	56 50	42	53 52 54 62 58	68 67 56	41 36 		179 191 190 174	77 75 85 74	D D D
33. 42. 53. 75. 85.	60	1548 1610		867	188·0 191·0 188·0 198·0 220·0	149·0 154·0 157·0 151·0 152·0	133·5 143·5 138·0 143·0 136·0	99·0 101·0 104·0 107·0 102·0	121 118 117 124 118	167 183 178	51 53 61	38 32 37 36 35	53 58 58 51	66 65 64 61 55	37 33 33 36 34	17 11	177 167 193 177	80 75 81 78	M Bl M Bl M
95. 120. 131. 135. 142.	60 65 60 60			809	195·0 183·0 184·0 181·0 185·0	154·0 152·0 151·5 152·0 152·0	143·0 144·5 142·0 143·0 137·5	105·0 101·0 99·0 107·0 104·0	122 124 114 112 119	170 196 167 174 179	57 49 49 55	37 40 39 35 38	61 59 57 62	62 66 70 59 60	34 31 36 31 33	19 18 18 14 18	185 185 165 182	83 78 79 82	D D-M D-M D-M
143.	65				170.0	151.0	138.0	101.0	112	169	49	37	59	64	33	19			

APPENDIX V Particulars of Island Lake Women¹

		Head		Nose	Ear	Hand	
Serial number Age Stature Arm reach Sitting height	Glabella ad maximum Biparietal maximum	Bizygomatic maximum Frontal	Menton- nasion Menton- crinion	Height Width Mouth (length)	Length Width	Upper lip (length) Length	Colour of iris
		AGED 20	то 59 чел	RS			
1 25 1611 1673 85. 2 25 1647 1754 86. 3 28 1626 1702 88. 4 21 1615 1698 84. 5 21 1599 1677 84.	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccc} 138 \cdot 0 & 103 \cdot 0 \\ 142 \cdot 5 & 103 \cdot 0 \\ 141 \cdot 0 & 97 \cdot 0 \\ 141 \cdot 0 & 100 \cdot 0 \\ 135 \cdot 0 & 99 \cdot 0 \end{array}$	119 181 130 197 121 184 124 186 118 178	55 30 56 52 35 54 47 33 56	60 31	14 177 79 14 178 77 13 181 83 21 181 76 16 181 77	D G Bl G
6 40 1529 1621 82 7 45 1538 1663 82 8 55 1547 1688 82 9 35 1568 1679 84 13 35 1520 1652 79	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccc} 143 \cdot 0 & 105 \cdot 0 \\ 140 \cdot 0 & 107 \cdot 0 \\ 133 \cdot 5 & 100 \cdot 0 \\ 149 \cdot 0 & 105 \cdot 0 \\ 139 \cdot 0 & 100 \cdot 5 \end{array}$	117 167 118 171 131 181 121 177 119 187	53 34 59 54 36 57 50 35 61	53 32	19 166 82 13 178 82 20 175 79 20 185 84 16 174 80	M T P
16. 24 1710 1737 88: 17. 35 1525 1649 81' 21. 30 1605 1715 89: 22. 35 1605 1687 85: 23. 45 1515 1640 79:	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccc} 140 \cdot 0 & 111 \cdot 0 \\ 142 \cdot 5 & 106 \cdot 0 \\ 139 \cdot 0 & 107 \cdot 0 \\ 144 \cdot 0 & 102 \cdot 0 \\ 139 \cdot 0 & 99 \cdot 0 \end{array}$	118 175 122 183 119 177 121 188 114 168	51 31 59 51 38 63 50 40 57	63 33 60 30 61 32 57 34	19 182 80 19 180 80 19 187 77 17 179 84 19 172 78	D-M P D G D G
25. 30 1577 1665 813 26. 26 27. 30 1586 1693 813 28. 38 1545 1690 810 29. 30 1604 1666 843	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	137·5 99·0 138·0 106·0 134·5 105·0 148·0 105·0 140·0 105·0	121 172 107 162 117 169 130 177 117 169	42 37 61 47 40 55 56 34 62		14 176 77	D-M G D P D-M G Bl P D-M G
33 30 1609 1685 853 35 1494 1594 77. 36 36 1587 1686 80. 37 30 1562 1656 77. 38 30 87.	3 184·0 149·0 4 182·0 149·0 8 186·5 149·0	$\begin{array}{cccc} 139 \cdot 0 & 102 \cdot 0 \\ 140 \cdot 5 & 102 \cdot 0 \\ 137 \cdot 0 & 102 \cdot 0 \\ 137 \cdot 0 & 101 \cdot 0 \\ 134 \cdot 0 & 108 \cdot 0 \end{array}$	117 165 114 166 121 185 125 181 124 186	47 32 60 53 36 59 51 34 55		17 174 81 17 173 78 14 183 78 19 182 78 18 180 82	D T D-M T Bl G
39 30 1664 1760 858 40 45 1589 1688	190·0 149·5 191·0 153·0	$\begin{array}{c cccc} 143 \cdot 0 & 104 \cdot 0 \\ 139 \cdot 0 & 102 \cdot 0 \end{array}$	117 178 119 197			16 182 82 17 179 80	
		AGED 60 YE.					
10. 60 823 11. 60 823 12. 60 1624 18. 65 1500 1624 789 24. 65 1632 1745 823	188·0 151·0 195·0 158·0	$\begin{array}{c cccc} 148 \cdot 5 & 109 \cdot 0 \\ 142 \cdot 0 & 100 \cdot 0 \\ 139 \cdot 5 & 100 \cdot 0 \\ 148 \cdot 0 & 106 \cdot 0 \\ 150 \cdot 5 & 110 \cdot 0 \\ \end{array}$	109 170 122 173 116 168 128 182 119 169	53 40 65 51 40 62 53 37 60	67 35 71 33	13 180 82 16 185 84 19 183 80 22 169 80 25 181 79	D-M G D-M P D P
30 65 1545 1740 822 31 65 1565 1669 798 32 65 1654 1816 853	190.0 152.0	142·0 135·5 147·5 140·0 140·0		52 37 58 54 40 69 53 40 64		17 177 82 22 17 190 83 18 184 84	D 8 D-M G D-M G D P
44 14014 50414 504 504	105 01 115 51		20 YEARS	DESCRIPTION OF THE PARTY OF THE	FO: 071	481 48415	. DI
1416 1521 1452 788 1516 1529 1457 818 1916 1529 1617 818 20 15 1632 1667 865	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		116 169 109 171 113 166 114 157	15 35 54 18 31 56		17 175 77 13 167 77 13 168 77 19 187 77	D-M

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

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APPENDIX VI

Particulars of Island Lake Boys

							Head	l			No	ose		E	ar	th)	Ha	nd
Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic	Frontal minimum	Menton- nasion	Menton- crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width
							AGED 1	0 то 1	9 YE	ARS								
3 61 102	19	1699 1676 1668	1737	917 886 888	187·5 187·0 194·0	157·0 151·0 160·5	142·5 141·0 144·5	107·0 103·0 106·0	120 122 118	177 182 192	53 52 48	38 38 38	55 56 61	61 62 63	40 37 35	19 20 14	183 195 182	82 89 77
41 72 82 101	18 18	1696 1769 1622 1676	1877 1677	908 915 863 875	$194 \cdot 0$ $197 \cdot 0$ $191 \cdot 0$ $202 \cdot 0$	$149 \cdot 0$ $151 \cdot 5$ $153 \cdot 0$ $154 \cdot 0$	144·0 146·0 136·0 140·0	107·0 108·0 104·0 108·0	124 123 118 129	179 183 171 189	54 54 55	38 38 	55 64 60	62 63 60	36 36 	19 21 20	193 202 183 194	88 88 82 86
42 54 55 79 103	17 17 17	1759 1671 1759 1698 1613	1783 1845 1778	902 897 959 882 848	198·5 189·0 202·0 187·0 188·0	152·0 148·0 152·0 152·5 150·0	150·5 145·0 145·0 142·5 136·5	103·0 106·0 102·0 102·0 102·0	126 134 132 122 121	185 187 198 187 175	52 54 55 51 49	36 36 41 37 33	54 56 55 56 56	68 68 66 56 55	35 34 35 33 31	20 15 16 17 15	193 191 209 197 177	90 83 91 88 77
27 28 88 3B.	16 16	1614 1712 1438 1616	1742 1543	838 961 737 805	191·5 188·0 179·0 189·0	150·0 144·0 144·5 147·5	138·0 137·0 133·0 137·0	104·0 102·0 103·0 105·0	116 117 117 115	181 177 172 164	50 51 50	38 32 38	51 59 57	66 60 60	39 34 32	18	185 167 182	84 70 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 19 22 89 12B. 13B.	14 14 14 14	1542 1479 1399 1469	1526 1597 1567 1450 1525 1627	751 843 768 728 752 848	187·0 187·0 182·0 179·5 187·0 191·0	150·0 153·0 146·0 151·0 148·5 153·5		105·0 104·0 102·0 106·0 101·0 108·0	110 108 109	167 177 163 169 165 171	47	29	52	58	34	16		68
44 58 100 2B. 6B. 9B. 10B. 11B.	13 13 13 13 13 13	1739 1422 1449 1414 1462 1391	7 1487 1832 2 1534 1 1518 1 1479 2 1527 1 1440 3 1460	775 903 754 755 733 755 730 723	190·5 181·0 175·5 186·0 180;·5 187·0 181·0 192·0	155·0 148·5 143·0 148·0 148·0 148·5 150·5 158·0	$131 \cdot 0$ $130 \cdot 0$ $132 \cdot 5$	102·0 100·0 101·0	122 109 108 108 107 109	172 180 168 156 154 159 155 175	47 522 49 46 46 49 46 48	30 37 34 30 31 31 31 32	47 53 55 51 51 56 52 53	61 56 56 53 55 51 56	34 31 32 31	15 15 12 16 17	164 157 164	71 68 69 65 66
7B. 8B.			1440 1467	729 715	183·0 187·0	145·0 154·0	130·0 138·0	100·0 100·0		164 173	52 50	34 32	53 51	60 58		15 17	159 159	
11			1420 1470	724 754	172·0 186·0	142·0 145·5	$124 \cdot 0 \\ 127 \cdot 0$		101									
13 14 4B. 5B.	10	1258 1290	1446 1295 1371 1361	696 678 700 666	186·0 184·0 186·0 172·0			99.0	106 108		 46 48	31 29	50 44	58 60	32 35	••••	149 147	69 60

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APPENDIX VII

Particulars of Oxford House Boys

							Hea	d			No	se		E	ar	th)	На	nd
Serial number	Age	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic	Frontal minimum	Menton- nasion	Menton- crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width
							AGED 1	0 то 1	9 YE.	ARS								
4 51 58	19 19 19	1675	1810	912	187·0 199·0 199·0	149·0 147·0 141·5	$137 \cdot 0$ $140 \cdot 5$ $139 \cdot 0$	95·0 108·0 107·0	117 127 123	176 190 179	49 51 49	34 39 34	56 58 54	60 70 64	32 38 34	16 22 17	183 195 206	87 90 87
3B. 7 1B. 13 16 46	18 17 17	1615	1789 1691 1680	884 880 825 849 754	185·0 192·0 184·0 186·5 174·0 181·0	146·0 152·0 146·0 147·0 132·5 155·0	139·0 140·5 135·0 135·5 129·5 141·5	101·0 102·0 100·0 103·0 93·0 101·0	132 124 131 111 107 118	186 192 184 176 169 174	56 50 59 50 48 52	38 32 33 34 34 34 38	64 54 57 56 50 56	66 58 59 62 63 62	34 30 36 32 32 36	14 17 12 14 14 14	186 180 186 189 173 190	80 84 80 87 80 85
6 9		1729 1534		952 827	198·0 190·0	154·0 144·0	141·5 135·5	107·0 103·0	129 117	192 179	56 50	36 33	55 54	70 62	34 29	18 17	198 179	94 81
5 8 12 14 15	14 14 13	1358	1669 1423 1577	768 809 750 757 768	182·0 182·0 181·5 190·0 188·0	140·5 145·0 151·0 150·0 150·0	$130 \cdot 0$ $132 \cdot 0$ $121 \cdot 0$ $137 \cdot 0$ $131 \cdot 5$	101·0 99·0 100·0 103·0 103·0	116 108	166 177 162 165 174	48 49 42 47 43	29 33 34 33 32	50 55 46 51 56	62 64 60 65 62	33 34 31 33 38	20 17 18 16 17	167 175 152 157 177	79 78 65 77 76
2 10 11	11	1339 1324 1329	1426	743 714 716	181·0 175·0 186·0	146·5 143·0 146·0	135·5 125·0 128·0	106·0 97·0 101·0	102	160 162 163	47 44 46	31 34 31	57 53 48	61 72 59	33 36 36	18 15 13	167 146 157	71 64 66

APPENDIX VIII

Particulars of Island Lake Girls

							Hea	ıd			No	ose		E	ar	th)	Ha	nd
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
							AGED 1	0 то 1	9 YE.	ARS								
11 36 57 60 62 66 90	19 19 19 19 19	1592 1498 1533 1551 1672	1700 1727 1810 1660	800 837 796 821 865 854 804	188·0 181·0 170·0 180·0 189·0 187·0 190·0 170·0	153·0 148·0 150·0 148·0 148·0 150·5 148·0 137·5	138·0 134·0 141·5 142·0 135·5 142·0 141·0 127·0	107·0 101·0 99·0 111·0 101·0 104·0 90·0	114 107 113 111 131 124 112 106	178 157 177 171 186 199 169 158	47 47 47 46 51 54 48 51	33 36 40 36 35 34 36 33	57 53 56 50 55 55 59 46	59 58 62 52 52 54	32 34 37 35 34·5 33 32	17 15 18 12 20 17	167 176 173 187 184 197 178 178	75 73 77 80 75 78 77 72
37 50 64 141	18 18 18	1557 1521 1577 1507 1540	1653 1572 1593	814 847 817	194·5 180·0 188·5 182·0 176·0	150·0 151·0 145·0 149·5 141·0	$130 \cdot 0$ $132 \cdot 5$ $140 \cdot 0$ $142 \cdot 0$ $131 \cdot 5$	100·0 101·0 103·0 104·0 104·0	122 117 121 114 119	182 177 180 177 172	49 50 50 52	33 36 41 34	60 55 58 53 54	62 55 62	32 35 32	14 12	183 170 175	78 77 77
13 45 113 123 136	17 17	1607 1640 1608 1561	$\begin{array}{c} 1765 \\ 1672 \end{array}$	830 856 827	189·0 193·0 187·0 181·0 184·0	$152 \cdot 0$ $150 \cdot 0$ $145 \cdot 0$ $141 \cdot 0$ $147 \cdot 0$	$136 \cdot 0$ $142 \cdot 5$ $138 \cdot 0$ $136 \cdot 0$ $135 \cdot 0$	102·0 108·0 101·0 99·0 98·0	118 124 113 119 113	177 186 168 162 172	48 51 52 45 45	35 36 34 37 35	54 52 55 51 55	63 51 52 58	38 35 31 31	18 14 14	179 188 175 179 187	77 77 77 74 79
4 47 71 140 144	16 16 16		1617 1779 1644	870 800 848 792	193 · 0 185 · 0 188 · 5 185 · 5 181 · 0	153·0 151·0 147·0 153·0 152·0	$144 \cdot 0$ $135 \cdot 0$ $137 \cdot 0$ $142 \cdot 0$ $138 \cdot 0$	102·0 102·0 107·0 117·0 105·0	115 108 119 118 116	174 163 182 183 172	53 44 53	33 36 39 33	52 58 51 47	65 58 56	34 31 34	14 16 15	170 198 180 171	73 80 84 73
101 1G. 2G. 6G.	15 15	1500	1626	816 795 763 819	188·5 184·0 190·0 183·0	$154 \cdot 0$ $146 \cdot 0$ $147 \cdot 0$ $155 \cdot 0$	140·0 137·0 140·0 145·5	107·0 101·0 104·0 108·0	113 111 107 112	175 167 161 183	44 45 47	35 35 32	57 51 52 52	56 59 55 57	32 32 33 31	15 16	176 179 174 188	78 73 74 83
							AGED 1	3 то 1	4 YE	ARS								
25 4G. 5	14 13	1543 1407 1491	1477	814 735 788	182·0 183·0 183·0	144·0 145·0 144·0	133·0 132·0 130·0	105·0 102·0 100·0	111 108 108	162 176 168	46	35	49 52	56	36		156	72

	25 4G. 5 137 5G. 7G.	14 1407 1477 13 1491 1523 13 1366 1432 13 1429 1494	735 183 788 183 730 184 729 178	0 144·0 133·0 145·0 132·0 144·0 130·0 139·0 126·0 142·0 129·0 145·5 137·0	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	176 46 168 161 44 149 41	35 49 52 52 29 45 33 47	56 36 57 32 54 33	14 158 163 163 163 163 163 163 163 163 163 163
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70

APPENDIX IX

Particulars of Oxford House Girls

						Hea	ıd			N	ose	(E	ar	tth)	H	and
Serial number	Stature	Arm reach	Sitting height	Glabella ad maximum	Biparietal maximum	Bizygomatic maximum	Frontal	Menton- nasion	Menton- crinion	Height	Width	Mouth (length)	Length	Width	Upper lip (length)	Length	Width

AGED 10 TO 19 YEARS

8 13		1595 1526	1727 1718	891 825	185·0 184·5					184 162	57 43	32 35	50 55	 	13 15	184 184	80 76
14 1 6 7	15 15 15	1403 1539 1543 1561	1698 1646 1657	794 810 841 839	174·0 182·0 190·0 182·0	$148.0 \\ 143.5 \\ 151.5$	$133 \cdot 0$ $127 \cdot 0$ $133 \cdot 5$	95·0 100·0 102·0 102·0	109 122 119	160 162 186 176	43 51 48 46	35 34 33 30	50 49	 	14 14 19 17	161 180 174 171	71 76 74 76
5 11 9	14 14	1514 1514 1472 1507	1602	828 813 805	185·0 185·0 185·5	152·0 147·5	138·0 132·5		121 114	169 187 176 184	51 44 52	34 32 32 33	51 49 50 52		14 12 17 11	182 177 176 183	77 78 77 75
3 4			1614 1626	749 813	184·5 192·0			101·0 102·0		162 166	49 41	30 32	48 52	 	15 18	167 180	66 74
2 15 16	11	1439 1336 1300		786 735 739	175·5 176·5 178·0	140.0	$122 \cdot 5$	101·0 96·0 101·0	109	159 162 147	48 48 41	31 30 32	52	 	12 13 10	173 157 156	76 65 65

Appendix X

Distribution and Particulars of Carious Teeth

	number						U	PPEF	T	EET	н]	Low	VER	TE	ETH					-
_					Rig				1_				Left						1	Right				1_				Left			ber
	Serial	M 3	M 2	M 1	Pm 2	Pm 1	C	I I	I	I	C	Pm 1	Pm 2	M 1	M 2	M 3	M 3	M 2	M 1	Pm 2	Pm 1	CI	I 1	I	I	Pn 1	Pm 2	M 1	M 2	M 3	Number
sland Lake men	9 16 36 76 78 96 97 30 83 47 67			×									×	×				×	××××									×× ××× ×	×		} 1 2 3 4 4
sland Lake old men	71 4 86 77 46 39	×	×	×××										×	×	×	?	?	× × ?		×							××× ?	?	?	\ \begin{cases} 1 \\ 2 \\ 4 \\ 5 \\ 12 \end{cases}
Gods Lake men	1 15 22 8 12 16 4 18				×			>	<					×			×	×	×									×××	×	×	} 1 2 3
Gods Lake old men	5 7 2 10 19 6	×		×	×							×		×××	×	×	×	×	×			××	×	×	×			×	××		} 2 3 4 9

1

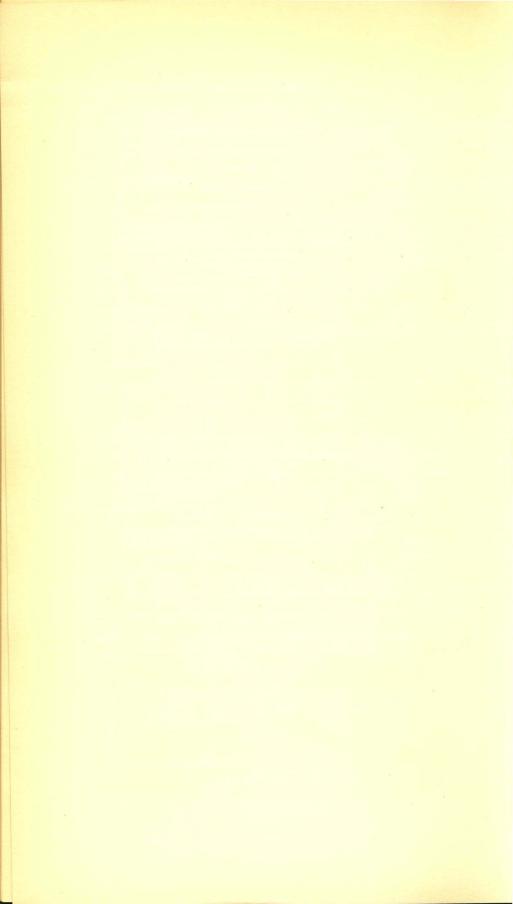
APPENDIX X (Continued)

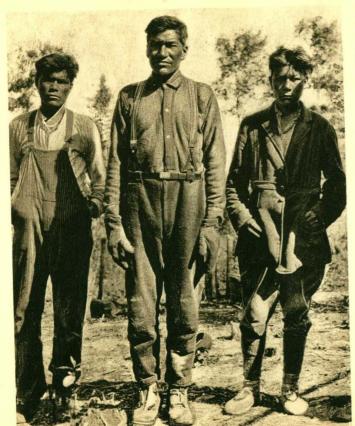
Distribution and Particulars of Carious Teeth (Continued)

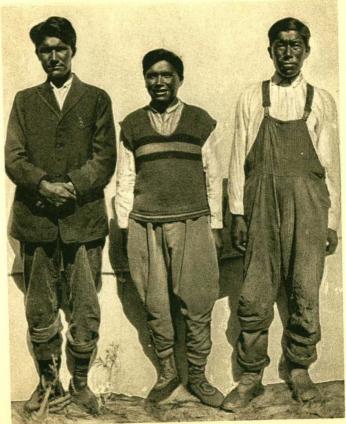
		_						-		-	_																					
	number						U	PEI	R T	EET	гн												Lov	VEF	т ТЕ	ETH						-
_	l nu				Rig	ht			1_				Lef	t					1	Right	;			1				I	eft			ber
	Serial	M 3	M 2	M 1	Pm 2	Pm 1	C		I I	I 2	C	Pm 1	Pm 2	M 1	M 2	M 3	M 3	M 2	M 1	Pm 2	Pm 1	C		I 1		C P	m l	Pm 2	M 1	M 2	M 3	Number decayed
Oxford House men	1 2 20 266 311 48 50 63 8 52 25 53 39 43 760 166 38 8 111 99 544 346	×	×	××××		×		>	< ×				×	× ××	××××		× × × × × × × × × × × × × × × × × × ×	×	×× × ×× ×× ×× ×× ×× ×× ×× ×× ×× ×× ×× ×									×	××××××××××××××××××××××××××××××××××××××	×× × × × × × × ×××××××××××××××××××××××	× × × × × × × × ×	2 3 4 5 7 8
	33 59 18	×	×	×		×			×			×	×	×	×	××	××××	×	××××										××××	××	XXXX	} 10 15
Oxford House old men	13 3 44	×										191				×	×	×	×				×						×	×	×	1 4 5

7

Gods Lake women	8 13 16 21 25 28 1 2 3 17 35 40 37				×				×	××	× ×× ×××××××××××××××××××××××××××××××××		×			× ××××× ××	×	×	1 2 3 5
Gods Lake old women	34 24 12 18 10 30	×	×	××	×		×	×			×××					×	×	×	} 1 2 3 4
Island Lake women	3 10 26 28 35 61 63 79 87 92 105 110 121 132 138 16 24 27 58 82 88 82 88 81 14	×					×			×	××× × × × × ××××××××××××××××××××××××××					× ×× × × × ×××××××××××××××××××××××××××			2
Island Lake old women	85 6 33										×				×	×			} 2







Island Lake Indians.

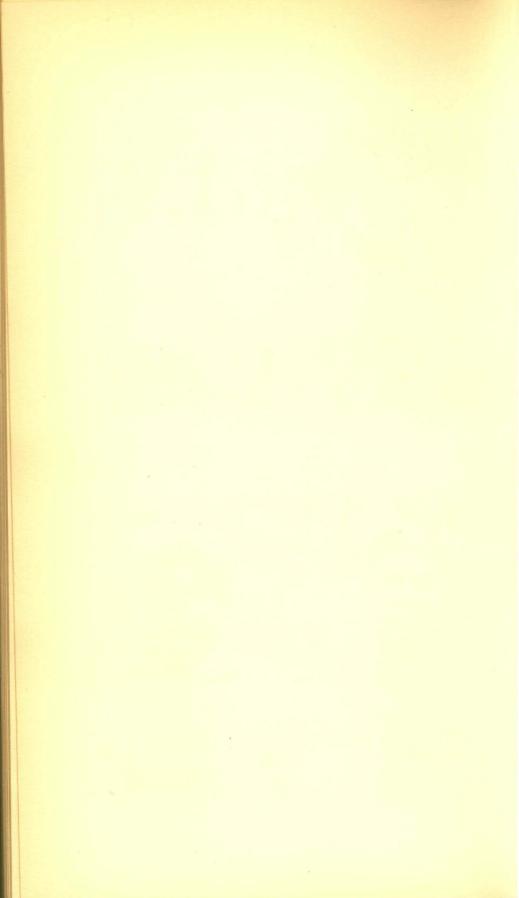
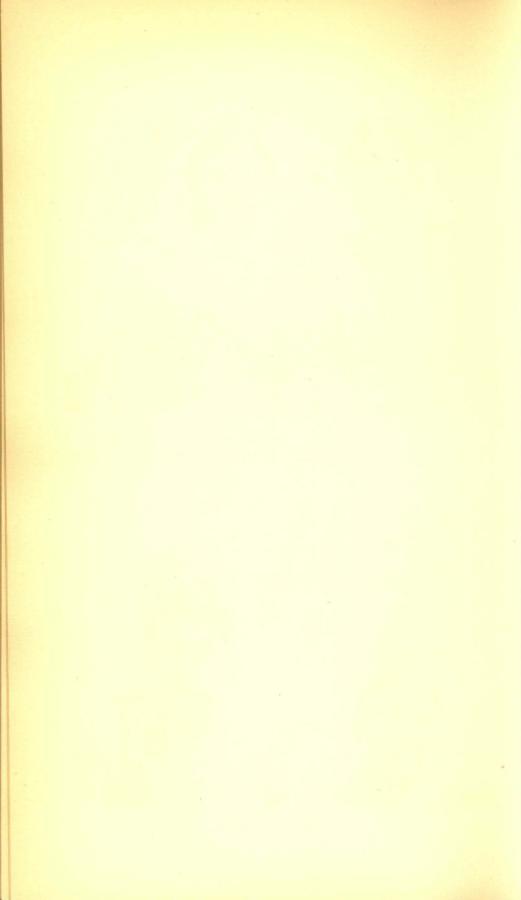


Plate II

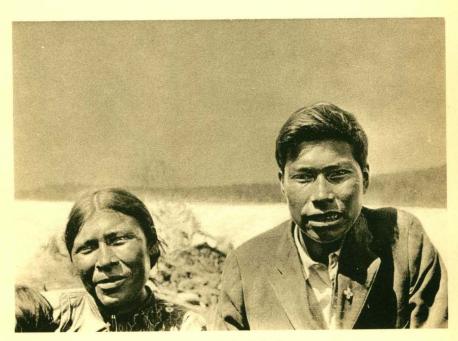




Island Lake Indians.

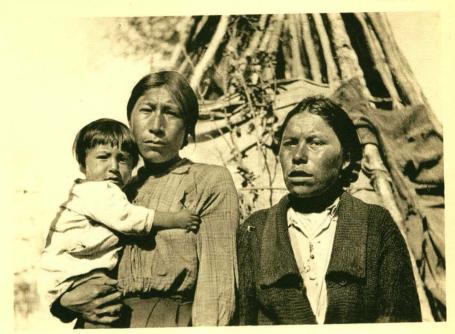


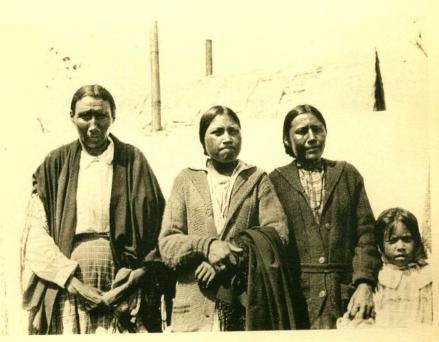




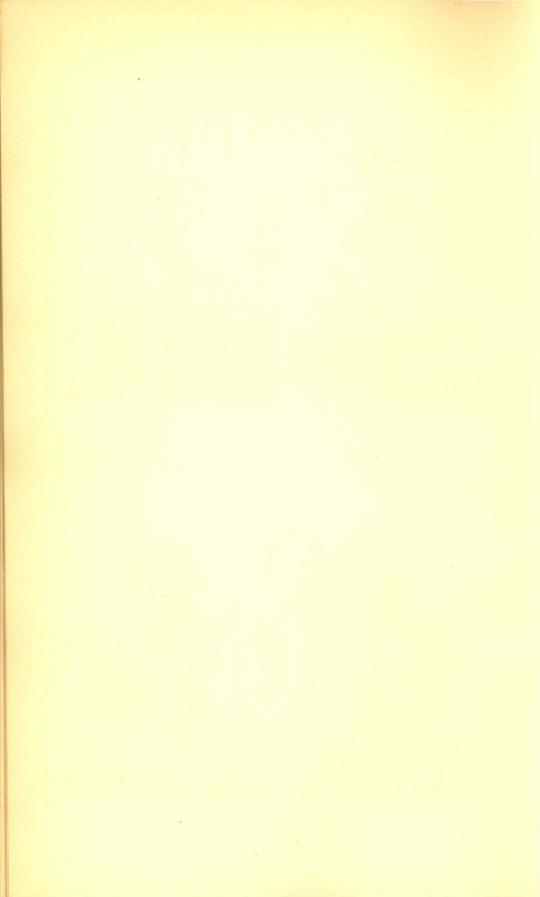
Island Lake Indians.







Island Lake Indians.







Island Lake Indians.

