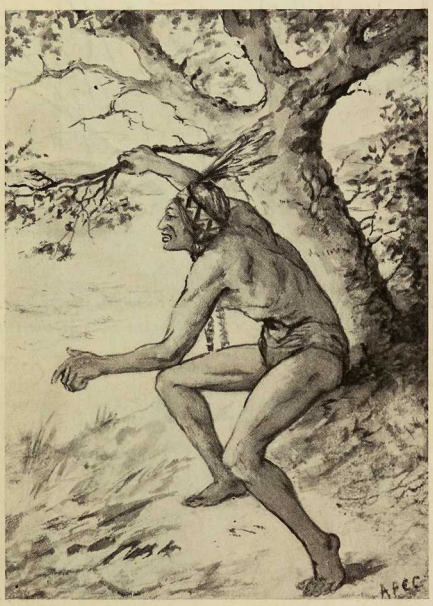
To Mr T. A. D. Menzies: with the clearest understanding that the day's success was due entirely to you — the "man behind the gun."
May 7. 38
F. W. Howay

Mrs Ruth Corbett

The Great Fraser Midden



"THE WATCHER"

From the original sketch by Amy E. C. Campbell-Johnston

Issued by

The Art, Historical and Scientific Association of Vancouver, B. C.

in the Interests of the City Museum

Chas. Hill-Tout

These interesting artifacts and skeletal remains recovered from this Historic Midden are on view in glass cases in the City Museum.

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PRESENTATION OF THE CAIRN

COMMEMORATING

THE GREAT FRASER MIDDEN

BY

The Historic Sites and Monuments Board of Canada

THROUGH

HIS HONOUR JUDGE F. W. HOWAY,

LL.D., F.R.S.C., Etc.

TO THE

CITY OF VANCOUVER

AND

BOARD OF PARK COMMISSIONERS

AT

MARPOLE GARDENS, VANCOUVER, B. C.

ON

7TH MAY, 1938

Under the Auspices of the

ART, HISTORICAL AND SCIENTIFIC ASSOCIATION

Directors of the Vancouver City Museum

AN ADDRESS

given at Marpole on the formal presentation of the Midden Cairn to the City by His Honour Judge Howay

by CHARLES HILL-TOUT, F.R.S.C., F.R.A.I. ENG., ETC.

IT has been the custom of the Historic Sites and Monuments Board of Canada for some years past to erect commemorative cairns upon sites in the Dominion that are of historic interest. You are standing this afternoon upon one such site, and the cairn you see before you has been erected through the good services of His Honour Judge Howay, who is the local representative of the committee, to commemorate the presence here in former days of a monument of the Past which antedates the coming of the white man to this continent and to this region, by over two thousand years. I have reference to that ancient native camp-site now known to archæologists the world over as the "Great Fraser Midden."

The shores of the bays and inlets of British Columbia are dotted with ancient middens, but we know of none so ancient and extensive as this midden of the Fraser, which in former days covered an area of four and a half acres and had a maximum depth of over 15 feet, the site of which is now almost entirely occupied by the present town of Marpole.

These middens, let me explain, are the dumps or refuse heaps formed by the natives in prehistoric times about their permanent settlements, and they now constitute almost our only source of knowledge respecting the native inhabitants of this region in pre-trading days; and when systematically investigated may be made to yield much valuable information regarding those times and conditions which we could gather today in no other way.

The writer's attention was first directed to this Fraser Midden some 45 years ago, when a road, which is now part of Marine Drive, was being cut through it.

In the making of this road the workmen unearthed a number of skeletons and many bone and stone artifacts. Hearing of these finds and being interested in such matters I visited the spot, and a very cursory examination of the roadbed made it quite clear to me that the road was being cut through an extensive midden-mass whose contents offered valuable and interesting evidence of the culture and prehistoric conditions of the aborigines of this section of the country, and of the antiquity of man in this region.

The first thing that arrested my attention was its apparent immense extent. It stretched, as I later ascertained, for upwards of 1,400 feet along an old bank of the river and had a width of over 300 feet.

Photo by Courtesy P. T. Timms.

GREAT FRASER MIDDEN, VANCOUVER, B. C.

That it was of considerable age and not a modern formation became evident from the fact that the road was being cut through a primeval forest the roots of whose trees were growing out of the midden-mass itself. This forest had obviously grown up since the camp-site had been abandoned.

The question now naturally arose: How long since this camp-site had been abandoned and what led to the abandonment of so long-established a settlement?

Standing on the midden site one looks across the river and perceives in mid-stream the cultivated lands we know today as Sea and Lulu Islands. These islands are wholly alluvial and were formed by the silt brought down by the Fraser in its annual freshets. It did not take much cogitation to see that at one time they must have been tidal flats like those now forming at the present mouth of the river, and that when in this condition they had been the source from which the midden makers had drawn the shell-fish whose remains entered so largely into the composition of this great midden.

Here then was the cause of the abandonment of this ancient camp-site—the conversion of these tidal shell-bearing flats into islands. That Sea and Lulu Islands were once tidal flats and capable of sustaining large numbers of shell-fish is shown by the brackishness of the water in the wells dug on the islands and by the fact that in digging these wells the diggers came upon beds of shells, *in situ*, similar to those that made up so large a portion of the midden-mass.

But as this seemed to point to a rather remote past for the formation of this midden I was reluctant to admit the obvious inference until I had ascertained that the enormous stumps of cedar and fir which I found projecting from the midden-mass, several of which had diameters of from six to nine feet and indicated by their annular rings a growth of from six to nine centuries—had their roots actually in the midden-mass itself and had obviously grown and flourished there since the midden had been abandoned.

Ascertaining this by personal excavation and realizing that over three-quarters of a millennium had passed away, for certain, since the site had been abandoned, I could no longer resist the inference that the midden had been formed before the present islands of Sea and Lulu had come into existence. How long ago this was, is difficult to determine with any degree of exactitude, but it may, I think, be safely concluded that the age of the islands, as such, cannot be less than the age of the oldest trees found growing out of the midden-mass, and these could not have started to grow until after the abandonment of this ancient camping-ground.

If we estimate the age of the islands, as I think we may, at about 1,000 years and then to this period add the time it must have taken to form so extensive a pile of refuse, we have in this midden fairly clear evidence that this region was occupied by a primitive people many hundreds of years ago. It possesses many features of the Danish Kjockken-Moedinger which led such eminent investigators as Worsaal, Steenstrup and Lubbock to regard the period of formation of these historic piles as "extending over many centuries at least, and more probably several millennia."

We are not unjustified then, I think, in claiming at least a thousand years for the accumulation of this similar and much larger midden.

Taking this view of the matter we may reasonably conclude that a primitive people had settled on this spot at least two thousand years ago, and it may have been considerably earlier.

THE GREAT FRASER MIDDEN CAIRN.

But this is not all we may learn from our examination of this ancient refuse-heap. It reveals also to us much interesting information concerning the cultural conditions of the people who formed it; and further, that two different peoples were concerned in its formation—a long-headed race and a broad-headed race.

The Indians of this region today are a distinctly broad-headed people, we know of no long-headed tribes in the Province; and yet from the lower layers of this midden, skulls of a markedly long-headed type have been recovered.

The importance of this difference in head-form will be best realized if I state that anthropologists regard the contours and indices of the head or skull as one of the best and most reliable criteria of race that can be found. It has long been known that mankind possess two fundamentally different head-forms. These are known as the dolichocephalic or long-headed kind and the brachycephalic or broad-headed kind.

Applying this criterion to the skulls taken from the midden-mass we find that they belong to two radically different kinds, one markedly long-headed and the other as markedly broad-headed. The modern Indians of this region belong to the latter class.

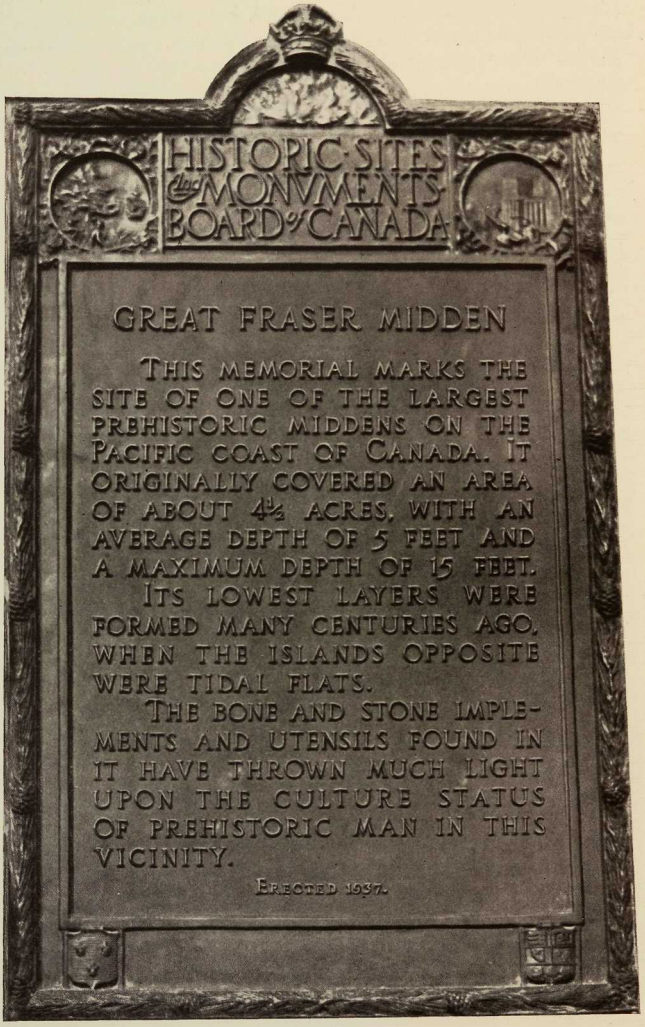
The recovery, therefore, from this midden of a number of long-headed skulls would seem to indicate the presence in this region in the past of a long-headed people.

Every Indian tribe we now have knowledge of in this Province is distinctly broad-headed, possessing a cephalic index which runs from 80 to 96, that is to say the width of the head is from 80 to 95 per cent of the length, while in a characteristic long-head the percentage falls below 75. Most of the long-headed skulls taken from this midden show a cephalic index of from 73 to 74. It is clear, therefore, that they belong to the long-headed type. But they differ not only in their cephalic indices from the common Indian type, they possess also certain other striking features which differentiate them still further from the present native peoples. These are the extreme narrowness of the forehead and the lofty sweep of the cranial vault, both of which features are absent in the modern Indian skull.

Who were these long-headed people whose remains are found in this midden? Were they the earliest settlers here, and, if so, what happened to them? Were they driven out or exterminated by a later broad-headed people such as the present tribes of this region?

These questions cannot be definitely determined with our present knowledge. We know, however, from other lines of evidence, that the Salish tribes occupying this region today are an intrusive people who came from the southeast. It may be that they found a long-headed people here and displaced them by extermination. However this may be, there is no doubt that the present broad-headed tribes in this region were preceded by a long-headed race.

My own opinion, which is shared by Dr. Hrdlicka of the National Museum of Washington, D. C., who is one of America's foremost physical anthropologists, is that these ancient long-heads were members of the Eskimo stock. The Eskimos are


HISTORIC SITES
and MONUMENTS
BOARD of CANADA
GREAT FRASER MIDDEN
THIS MEMORIAL MARKS THE SITE OF ONE OF THE LARGEST PREHISTORIC MIDDENS ON THE PACIFIC COAST OF CANADA. IT ORIGINALLY COVERED AN AREA OF ABOUT 4½ ACRES, WITH AN AVERAGE DEPTH OF 5 FEET AND A MAXIMUM DEPTH OF 15 FEET.
ITS LOWEST LAYERS WERE FORMED MANY CENTURIES AGO, WHEN THE ISLANDS OPPOSITE WERE TIDAL FLATS.
THE BONE AND STONE IMPLEMENTS AND UTENSILS FOUND IN IT HAVE THROWN MUCH LIGHT UPON THE CULTURE STATUS OF PREHISTORIC MAN IN THIS VICINITY.
ERECTED 1937.

a long-headed people and they have, moreover, a tradition among them that their remote ancestors lived much farther south than their present habitat. This view is further supported by the fact that a typical Eskimo skull has a keel-like ridge running from front to back of the skull, this feature characterizes some of the long-headed skulls taken from the midden.

Besides the presence here in former times of a long-headed people, this midden has revealed other interesting information to us. We learn that they had knowledge of surgery one would hardly expect to find among a primitive people such as these were. One of the broad-headed skulls taken from this midden bears distinct signs of trepanning or trephining, as it is variously called. This is a perforation of the skull—with us this is done for medical purposes, with the primitive it was done to let the evil spirit out which was the cause as they believed, of the patient's sickness. This operation is an exceedingly delicate one for a modern surgeon with the aid of the most perfect instruments. And yet these old-time medicine men at times successfully performed this difficult operation with only their rude instruments of shell or stone.

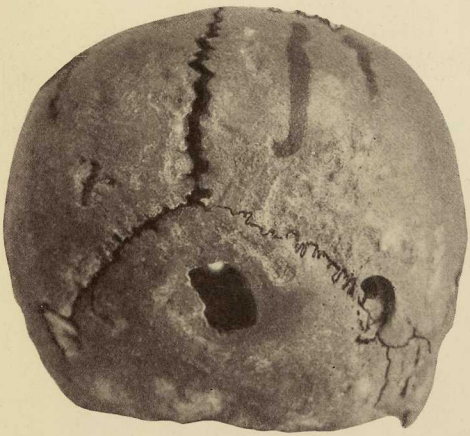
This particular skull has an added interest inasmuch as it is the first authenticated instance of trephining in this part of the world that has come to our knowledge. It is well known that the operation of trephining was practised by the Indians in other parts of the continent in prehistoric times, notably among the Inca people of South America, but this particular skull is the only evidence we possess at present that the operation was successfully performed here. We know that the operation was successful in this instance from the fact that new bone had grown about the edges of the operation. The operation, although successful at the time, did not apparently restore the patient's health, for a second operation would seem to have been performed at another point on the skull. From the absence of any new bone growth about the edges of this perforation we conclude this second operation was too much for the poor patient. It apparently put an end to his existence.

But even these discoveries do not exhaust the interest of this midden. From the many bone, stone and ivory implements and utensils brought to light by our explorations we can gather a fair knowledge of the material culture of these midden-makers, we learn that they were skilled workers in stone and bone. A large and varied assortment of objects made from these materials has been taken from the midden-mass since it was first opened up. These comprise some finely-made bone needles with the eye sometimes at the point, sometimes at the heel and sometimes in the middle; barbed harpoons, spearheads, arrowheads, knives of various kinds and shapes, chisels, adzes, carved mortars and pestles, bowls, swords, wampum and endless other objects. The City Museum houses a goodly collection of these midden artifacts. Some of the more striking of these may be seen in the illustrations accompanying this paper, others will be found in the writer's monograph entitled "Later Prehistoric Man in B. C." printed in the "Proceedings" of the Royal Society of Canada, Ottawa, 1895.

STONE IMPLEMENTS. EBURNE SHELL MOUND. B.C.

This brief description of a British Columbian midden which I was asked to give at this time should make it quite clear that we possess in these vanishing monuments of the past, when properly and systematically investigated, an invaluable source of information concerning the native races that preceded us in this region—information that we could gather today in no other way; and it is of the highest importance that they should be systematically investigated before they are wholly destroyed and obliterated as so many of them already have been.

In view of the widespread interest this prehistoric midden has called forth in the anthropological world and because of the abundant archæological treasures it has yielded in the past 45 years, it seems to me to be particularly fitting and appropriate to mark and commemorate in some suitable way the site upon which it stood, and on behalf of the Art, Historical and Scientific Association and the City Museum I take this opportunity of thanking His Honour Judge Howay for the efforts he successfully made in bringing about the erection of this memorial cairn at this spot.



TREPANNED SKULL

BONE IMPLEMENTS

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To Maintain and Develop the Museum and Art Gallery;
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To Preserve Examples of Native Indian Arts and Crafts.

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