

Occipito-frontal arch, . . .	13½	13¾	14½	15½	13½
Horizontal circumference, .	19½	20	20½	22	20

No. 4 is in Mr. Guilbault's collection. The others are in my possession. Nos. 5 and 6 belonged to a female and male skeleton buried together. They have the Wormian bones largely developed, which is not the case with the others. No. 8 is remarkable for a lateral distortion which seems in part to have existed during life, but must have been increased by the pressure of the soil after the decay of the soft parts.

I have been very desirous to ascertain if the measurements of the skulls were capable of throwing any light on the question of the particular Indian race to which these people belonged. Prof. Wilson of Toronto, has kindly furnished for the purposes of this comparison, the following table, presenting the average measurements of about forty Huron skulls, and of about thirty believed to be Algonquin.

	Huron.	Algonquin.
Length,	7.37 inches.	7.23 inches.
Breadth,	5.47 "	5.58 "
Height,	5.42 "	5.37 "

From this it would appear that the Algonquin skull is shorter, broader and lower than that of the Huron. The measurements of skulls from Hochelaga, given in this and my previous paper, present so great diversities among themselves, that any comparison with the averages above stated would seem impossible. Nos. 3, 4 and 8, approach very nearly to the Algonquin type; Nos. 6 and 7 to the Huron. No. 7 is remarkable for its length, and contrasts in this respect very strongly with No. 4. Either the cranial type of the Hochelaga tribe presented within itself much greater diversities than those indicated by Prof. Wilson's averages, or the individuals whose remains have been found, belonged to more than one tribe. In either case a much larger number of skulls would be required to give satisfactory data for comparison; and it would then perhaps be possible to eliminate abnormal forms and those which might be of foreign origin. Nor must the consideration be omitted, that in a central locality, at the confluence of two great rivers, and at a time when Hochelaga may have been the point of union of various tribes, giving way before the inroads of the Iroquois and Hurons, its population may have been of a very mixed character.

The following remarks on the deformed skull noticed above, are from a paper by Dr. Wilson, in the *Canadian Journal* of September:

"In an interesting paper on 'Aboriginal Antiquities recently discovered in the Island of Montreal,' published by Dr. Dawson in the *Canadian Naturalist*," he has given a description of one female and two male skulls, found along with many human bones, at the base of the Montreal Mountain, on a site which he identifies with much probability, as that of the ancient Hochelaga, an Indian Village visited by Cartier in 1535; and which he assigns on less satisfactory evidence to an Algonquin tribe. Since the publication of that paper, my attention has been directed by Dr. Dawson to two other skulls, a male and female, discovered on the same spot, both of which are now in the Museum of McGill College, Montreal. One of these furnishes a still more striking example of a cranium greatly altered from its original shape subsequent to interment. It is the skull of a man about forty years of age, approximating to the common proportions of the Iroquois and Algonquin cranium, but with very marked lateral distortion, accompanied with flattening on the left, and bulging out on the right side. There is also an abnormal configuration of the occiput, suggestive at first sight, of the effects produced by the familiar native process of artificial malformation. This tends to add, in no slight degree, to the interest which attaches to the investigation of such illustrations of abnormal craniology; as the occurrence of well established examples of posthumous deformation among crania purposely modified by artificial means exhibits in a striking manner the peculiar difficulties which complicate the investigations of the naturalist when dealing with man. The evidence which places beyond doubt the posthumous origin of the

distortion in this Hochelaga skull is of the same nature as that which has already been accepted in relation to an example recovered from an Anglo-Saxon cemetery at Stone, in Buckinghamshire. The forehead is flattened and greatly depressed on the right side, and this recedes so far, owing to the distortion of the whole cranium, that the right external annular process of the frontal bone is nearly an inch behind that of the left side. The skull recedes proportionally on the same side throughout, with considerable lateral development at the parietal protuberance, and irregular posterior projection on the right side of the occiput. The right superior maxillary and malar bones are detached from the calvarium, but the nasal bones and the left maxillary remain in situ, exhibiting, in the former, evidence of the well developed and prominent nose characteristic of Indian physiognomy. The bones of the calvarium, with one slight exception, have retained their coherence, notwithstanding the great distortion to which it has been subjected, though in this example ossification has not begun at any of the sutures. The exception referred to is in the left temporal bone, which is so far partially displaced as to have detached the upper edge of the squamous suture. Part also of the base of the skull is wanting.

"The posthumous origin of the distortion of this skull is proved beyond dispute on replacing the condyles of the lower jaw in apposition with the glenoid cavities, when it is found that, instead of the front teeth meeting the corresponding ones of the upper maxillary, the lower right and left incisors both impinge on the first right canine tooth, and the remaining teeth are thereby so displaced from their normal relation to those of the upper jaw, as to preclude the possibility of their answering the purpose of mastication—which their worn condition proves them to have done,—had they occupied the same relative position during life.

"The extreme distortion which this skull has undergone is still more apparent when looking on it at its base. The bone has been fractured, and portions of it have become detached under the pressure, while the mastoid processes are twisted obliquely, so that the left one is upward of an inch in advance of the right.

"The circumstances under which this Indian skull was found tend to throw some light on the probable process by which its posthumous malformation was effected. It was covered by little more than two feet of soil, the pressure of which was in itself insufficient to have occasioned the change of form. The skull, moreover, was entirely filled with the fine sand in which it was embedded. If, therefore, we conceive of the body lying interred under this slight covering of soil until all the tissues and brain had disappeared, and the infiltration of fine sand had filled up the hollow-brain case; and then, while the bones were still replete with the animal matter, and softened by being filled with moist sand and embedded in the same, if some considerable additional pressure, such as the erection of a heavy structure, or the sudden accumulation of any weighty mass, took place over the grave, the internal sand would present sufficient resistance to the superincumbent weight, applied by nearly equal pressure on all sides, to prevent the crushing of the skull or the disruption of the bones, while these would readily yield to compression of the mass as a whole. The skull would thereby be subjected to a process in some degree analogous to that by which the abnormal developments of the Flathead crania are effected during infancy, involving as it does, great relative displacement of the cerebral mass, but little or no diminution of the internal capacity. The discovery of numerous traces of domestic pottery, pipes, stone implements and weapons in the same locality, furnishes abundant proof that it was the site of the Indian village as well as a cemetery, and thereby demonstrates the probability of the erection of such a structure, or the accumulation of some ponderous mass over the grave at a period so near to that of the original interment, as would abundantly suffice to produce the change of form described. To some such causes similar examples of posthumous cranial malformation must be ascribed; as they are so entirely exceptional as to preclude the idea of their resulting from the mere pressure of the ordinary superincumbent mass of earth.