

Ladies and gentlemen. You will perhaps find that I have given this paper of mine a somewhat pretentious, not to say arrogant title. I have of course only very briefly dealt with some of the problems we are confronted with. For natural reasons Icelandic archaeology is not a very fertile field and never will be. In this country we have hardly any prehistory at all. Our great inheritance is the brilliant mediaeval literature, the investigation of which, of course, is the natural and most tempting field for Icelandic scholars and foreign students of old Icelandic culture. This fact, however, is no reason why we should neglect such archaeological remains as there are in this country. Here, as everywhere else, they tell their own story and in their own way, and are entitled to a deserving place among the things which can throw light upon our old history and culture. I therefore thought it natural to give, especially to our overseas guests, some sort of a general survey of these matters at the beginning of this Viking congress. I also thought it might be an appropriate introduction to our museum, to which we shall now have the honour of conducting you.

Stature as a criterion of the nutritional level of Viking Age Icelanders

By *Jón Steffensen.*

Iceland was settled in the upheaval of the Viking Age by vikings who came mainly from Norway and the British Isles. For those who take interest in vikings the Icelanders, therefore, have particular significance, and even more so in view of the fact that they have lived in isolation on an island. There has consequently been little admixture of foreign blood since the Viking Age.

My time would not permit me to deal adequately with the physical anthropology of the nation as a whole, so I have had to narrow my scope and confine my discussion to the stature of the population.

The reason why I chose stature was that it will give us a better idea than all other anthropological characters of the living standards of the nation in past centuries. It will indicate how the Icelandic branch of the vikings fared in their new country.

The material on which I have based my study is on the one hand bone finds from various parts of the country dating from many different periods, and on the other measurements of Icelanders carried out in the 20th century.

I have classified the bone finds in accordance with the age and location of each find. The oldest material consists of bones dating from the pre-Christian period, i.e. from the years 874—1000, but a large majority of them date from the tenth century. They come from 86 individuals in all, distributed between the different parts of the country as follows: from the South-West there are eight, from the North-West peninsula two, from the North forty-four, from the East fifteen, and from the South seventeen. Only about half of this skeletal material, however, has been preserved well enough for use in calculations of stature.

The samples which come next in age consist of bones from the churchyard at Skeljastaðir in Þjórsárdalur in the South. They date

from the early Christian period, presumably all from the eleventh century, the latest possible date being 1104, when Mt. Hekla erupted for the first time on record. The bones are in excellent condition; there are fifty-five almost complete skeletons of adults.

The third group contains bones from the churchyard at Hafþjardárey in the South-West. It is known that the church was disused in 1563 and that its oldest records date from the year 1223. It is therefore pretty safe to assume that a church was built at Hafþjardárey soon after the introduction of Christianity. The bones are in excellent condition, but the skeletons of adults number only seventeen, whereas there are thirty-seven skeletons of adolescents and children.

I have put finds from several different localities into a separate group. They contain skeletons of thirty-nine adults and thirteen children, which cannot be dated with any degree of certainty. Some of them come from places where, according to old records, chapels were located, but we do not know when they fell into disuse. Undoubtedly most of these graveyards date from the Catholic era or hardly later than from 1600. Others come from burial grounds of which we have no records, some of them probably from the early Christian era or possibly from an earlier date, because some of the settlers are known to have been Christian. The skeletons were found in various parts of the country, their distribution being in detail as follows: three come from the South-West, thirteen from the South, three from the East, and thirty-three from the North of Iceland.

Forty skeletons have been unearthed from the foundation of the last Skálholt Cathedral. They unquestionably date from the period 1650—1796, but they are in a rather bad condition. Only just over half of them could be used for the purpose of this study.

Finally there are bones from eight skeletons of adults from a Reykjavík churchyard which was disused in 1850. These bones have been preserved in an excellent condition and apparently date from the 18th century to judge from the coffins in which they were found.

The whole material is from just over 300 individuals, but only about half of them are skeletons of adults preserved well enough for the purpose of determining their stature.

The South-West, the South and the North of Iceland are well represented with well preserved skeletons, the East of Iceland rather badly and the North-West peninsula not at all.

Taken together these bone finds suggest that the population of the country was more or less homogeneous, and when we except variations in stature and head size we may say that the physical characters of the nation have not undergone any changes that would suggest admixture of foreign blood. I want my listeners to bear this in mind, because it is of primary importance for the conclusions I draw from my study of stature later in this lecture.

As a basis for my calculations of stature I used the Tables of Trotter and Gleser (1952), using the length of the femur and tibia when both these bones were available, of the femur alone if the tibia was missing, of the tibia and one of the long arm bones if the femur was missing, and when only one long limb bone was available, whichever of them it was, I used it for my purpose. The reason why I have always, if possible, used the femur or any other long limb bone in conjunction with the tibia in my calculations is that the tibia is unusually short in Icelanders, proportionately much shorter than in Americans, who form the basis of the Tables I used. Consequently it may be assumed that the stature would be too high if the tibia was not included, and conversely it would be too short if the tibia was used alone. On the whole it may be said that the Tables of Trotter and Gleser give 3—4 cm higher stature than the Tables of Manouvrier and Pearson's formulae, which have been most widely used up to now, but for reasons given by Trotter and Gleser, which I accept as valid, I believe their Tables give more accurate results.

Table I. *Estimated maximum stature from long bones of Icelanders.*

Group	Date	Male		Female		Calculated as δ	
		No.	Mean stature	No.	Mean stature	No.	Mean stature
Pre-Christian	874—1000	22	172.3	17	161.2	39	173.2
Skeljastaðir	1000—1100	27	172.0	28	158.7	55	171.8
Hafþjardárey	ca.1100—1563	6	175.2	11	157.3	17	172.0
Various Places	ca.1000—ca.1600	16	171.0	10	159.4	26	171.5
Skálholt	874—ca.1600	71	172.2±.59	66	159.2±.61	9/δ	==.925
Reykjavík	ca.1650—1796	17	169.7	6	153.0	23	168.6
	18. century	4	167.0	3	154.0	7	166.8
	1650—1800	21	169.2±.93	9	153.3	30	168.2

The result of my calculations can be seen in Table I. When we look at the samples dating prior to the year 1600 we can see that