

WE AND THE OTHERS: PHYSICAL ANTHROPOLOGY OF FINNO-UGRIC PEOPLES

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At the end of 2014, the book *Physical Anthropology of Finno-Ugric Peoples* was published. It is based on the plentiful and unique but unfinished life's work of the outstanding Estonian anthropologist Karin Mark (1922–1999). The originally unfinished work was thoroughly complemented on the basis of manuscripts and brought to an end by Leiu Heapost [10].

On this occasion, we should give a short overview of the process of creation of this book and touch on anthropological research in Estonia generally and on some aspects of collecting the materials.

In our present-day age of speed and scientific progress, the human being as the main value of the nation seems to be somewhat neglected. The humans themselves, the features of their appearance, their genes, chromosomes and hereditary characteristics reflect the formation history of the whole nation.

The study of human beings is the subject of physical or biological anthropology, which was earlier called simply anthropology. Physical anthropology, as we know, studies the variability of humans' biological features in time and space. Research of humans' hereditary characteristics is only a small part of anthropology. There are several methods for studying them. Primarily, Estonians have studied Estonians and the ethnic minorities in Estonia as well as our kindred peoples somatologically, i.e. by measuring and describing their external features. Measuring and describing people of both the present and the past helps us find the external features characterising a person and the whole nation, and explain the course of their historical formation. Thus, measuring of people contributes to understanding of our place in history and the world.

ON THE ANTHROPOLOGY OF ESTONIANS AND FINNO-UGRIANS

The beginning physical anthropology of Estonians is traditionally dated to the 1814 doctoral dissertation of Karl Ernst v. Baer [3]. In the 19th and the early 20th centuries, several anthropological research papers were published, but mostly the conclusions, drawn on very scanty and often narrowly local material, spread even wrong opinions about Estonians. The ideas about Estonians' anthropological peculiarities and physical body build were quite faulty; there were many highly wrong descriptions of Estonians' physical habitus; Estonians were wrongly positioned into the "yellow race", etc. [2]. The theory about Estonians' Mongoloidness became widespread and was not completely abandoned even by the middle of the previous century.

Extensive anthropological research of Estonians began in the period of independent statehood in the 1920s–1930s. Here, the pioneer was Juhan Aul (1987–1994), the founder of systematic anthropology in Estonia. In the 1930s, he carried out anthropological measurements (by parishes and counties) and, based on exact measuring, gave an objective anthropological description of Estonians. He mapped the distribution of Estonians' external morphological features and also presented his own map of race types, based on enormous work – the measurements of more than 15,000 conscripts.

Aul used the methodology by which each person was classified into a particular race type.

According to Aul, mainly two predominant anthropological types distinguishable by appearance are randomly spread in Estonia – the so-called Western Baltic and Eastern Baltic anthropological types. The first of them is prevailing in the west; the second – the prominent type among Estonians in eastern Estonia – seems to be especially polymorphic, and thus difficult to define strictly. The distribution territories of these types are not isolated from one another; they are connected by large overlapping areas where they demonstrate a special appearance and complement each other. Both types are purely Europoid according to Aul's estimation. They are similarly characterised by light eyes and fair hair. Aul points out the originality of Estonians, comparing the Western-Baltic type with the Scandinavian type of the Atlanto-Baltic race and the Estonian Eastern Baltic type even with a more eastern variety [1, 12].

As early as in 1938, having risen to the position of the leading authority in physical anthropology in Estonia, J. Aul could point out that, during the 20 years of independence, a great deal of work had been done to erase the misunderstandings in the earlier anthropological characterisations of the people. Finally, Aul could firmly state that Estonians did not possess most of the traits suiting the racist prejudices of the era [2].

It is worth mentioning that J. Aul measured more than 50,000 Estonian men, women and school students and, for comparison, Estonian minorities – Swedes, Russians, Germans – and representatives of the neighbouring peoples – Latvians, Votians, Izhorians, northwestern Russians. Based on these data, he wrote a number of overviews, which made Estonians one of the somatologically most profoundly researched nations.

Aul's work was continued by the anthropologist Karin Mark who, along with her teacher Juhan Aul, was one of the founders of systematic anthropological research in Estonia. While J. Aul mostly studied Estonians' somatology, K. Mark initially devoted herself to the ethnic history of Estonians, i.e. how the modern anthropological features of Estonians could have been historically established. While studying at the University of Tartu in the 1940s, she became Prof. Juhan Aul's first student of anthropology and later his assistant. As a postgraduate student at the Institute of History, she studied thoroughly the whole paleo-anthropological (craniological) material collected by that time by the archaeologists of the Institute of History. In her studies, the main attention was focused on the problems of ethnic anthropology [4].

From 1952–1986, K. Mark worked as an anthropologist at the Institute of History of the Estonian Academy of Sciences in Tallinn. In the 1950s, one of the priorities of the Institute of History was studying the ethnogenesis of Estonians and their neighbouring nations. K. Mark had a special role in it, as she studied the ethnic history of the Estonian people on the basis of paleoanthropological materials. Her research on physical anthropology was always closely related to archaeology, ethnology and other studies of primeval history and ethnic history of Estonians. For example, K. Mark established two main clearly distinguishable anthropological types among the 12th–13th-century inhabitants of the Estonian territory. Essentially these types resemble those ascertained by Aul on the basis of somatological data and also correspond to their distribution territories in Estonia. The crania discovered from pit-graves almost everywhere in Estonia are mostly massive, with big cranial measurements, dolichocranic in shape, with high faces. These people had been tall in stature. The other anthropological type is mesocranic, more gracile. That type was spread in north-eastern Votic graves, also in south-eastern Estonia in the 11th–15th centuries [4, 5, 11]. According to Mark, inhabitants with similar external anthropological characteristics had also lived in the territory of Estonia in earlier times [5, 11, 13].

As early as in the 1950s, she presented her conception of formation of the anthropological types of present-day Estonians, which, in principle, has remained valid to the present [5]. In the 1950s, to obtain additional data for

retrospective treatment of problems of ethnogenesis, K. Mark started somatological studies in addition to craniological research.

Thereafter, in the second half of the 1950s, inspired by the well-known Russian anthropologist G. F. Debetz, K. Mark set herself the aim of studying the anthropology of all the peoples belonging to the Finno-Ugric language family, to obtain a clear understanding of the racial composition of present-day Finno-Ugric peoples. To carry out that labour-intensive grand project, annual shorter and longer research expeditions had to be organised. These took place regularly from 1955 until 1976. K. Mark participated in many international expeditions as an anthropologist and in some ethnographic expeditions in Russia. Still, she gathered the majority of her materials during the anthropological expeditions of the Institute of History of the Academy of Sciences.

During a period of twenty-two years, the anthropological material was collected on annual expeditions from the vast territory inhabited by Finno-Ugrians – from Finns, Sami, Karelians, Vepsians and Izhorians in the north and Transcarpathian Hungarians in the south. In the east, she collected material from Mordvinians, Udmurts and Komi in the central Volga area and the western foothills of the Urals, and Khants and Mansi in the Ob river basin of western Siberia. For comparison, the neighbouring peoples of the Finno-Ugrians were studied – Finnish Swedes, Russians, Chuvashes, Tartars and Bashkirs. In Estonia, the collection of material continued until 1980.

All anthropological measurements were carried out and descriptions written by K. Mark personally according to a uniform programme and methodology, thus avoiding the differences in measuring technique, which are unavoidable in the case of different researchers. This makes the material entirely unique. The research programme included 14 measurable and 32 descriptive features. For accurate recording of descriptive features, she used special charts, drawn by herself, where every feature was represented by its standardized variants.

For the author of present paper, taking part in the expeditions as Mark's assistant or gathering population genetic material in West Siberia, the Volga districts, in Transcarpathia as well as in Estonia was a good opportunity to follow the accuracy, concentration and persistence with which K. Mark performed anthropological fieldwork.

PREPARATIONS FOR EXPEDITIONS AND EQUIPMENT

Among the documents relating to the expeditions, two should be mentioned that everyone taking part in the expeditions definitely had to have. It was necessary for the chief of the expedition (and the others) to have a travelling warrant (*komandeering*) from the Institute for presenting to the local organs of power. The other extremely essential document for the chief of the expedition was the certificate (*tõend*) from the Academy of Sciences with a seal and necessary signatures. It stated the aim and the route of the expedition and asked the local authorities to render the expedition all-around assistance. Without that document, work would have been impossible. With that document, we had to turn to the First Secretary of the district or town Committee of the Communist Party. We introduced ourselves and the aims of the expedition – that we were researchers from the Institute of History of the Academy of Sciences and were studying the anthropology of Finno-Ugric peoples, that we were interested in native inhabitants of this district and we would like to find at least 100 men for studying the anthropology of the local district. We also asked for a local assistant who would help organise the work on-site. If the document was acceptable, the work usually succeeded. Usually, a local assistant or guide, who in the 1950s also served as an interpreter, was allocated to the expedition. On some occasions (in Mari and Udmurtia), the local scientific research institute appointed one of its staff members or students who later became a folklorist, linguist or ethnographer for organising the expedition's work on-site. At technical tasks, Mark was aided by laboratory assistants of the Institute History or by biology students of the University of Tartu. Usually, one to three assistants participated in expeditions.

Among the equipment of the expeditions, the most important items were anthropological measuring devices like precise standard metal measuring instruments, callipers, an anthropometer for measurement of stature, a scale for recording hair colour, forms for recording anthropometrical data, a camera, etc. They were kept in wooden boxes to avoid damage in transport. All the equipment, quite heavy in weight, needed special care and attention during all expeditions.

The main means of transport for visiting our easternmost kindred peoples were trains, buses and powerful land rover lorries. The latter were equipped with a few seats consisting of wooden planks and loops hanging from the metal framework overhead. During the ride, one had to hold on to them with one hand and, with the other hand, hold the instruments and luggage to keep them from falling over the edge. One had to press oneself firmly against the bench to make the ride at least somewhat smoother. These so-called freight taxis proved

to be quite functional considering the local road conditions. In addition to the train, all kinds of watercraft – ships, towboats, barges, motorboats, small waterplanes – had to be used for travelling on the Ob and its tributaries to reach the Ob Ugrians living on the expanses of Western Siberia. Sometimes special trips were organised for the expedition. More rarely, planes were used (in Siberia, also in southern Bashkortostan). Usually, there were long queues at ticket offices and irregular timetables, or no regular services at all. Therefore, travelling needed more time than expected. For visiting the kindred peoples living closer – Baltic Finns and Transcarpathian Hungarians – the expedition could use the minibus of the Academy of Sciences.

Work on the location. Everywhere, we had to start with explanations we repeated hundreds of times each summer – who we are, where we come from, that we want to study the local inhabitants of the district, that we measure their height, take some measurements of the head and the face, describe the colour of hair and eyes, the shape of the nose, etc., that we photograph them and hold them up only for five minutes for that purpose. The local assistant, who was aware of the aims of the work, gathered the local middle-aged men who had to be measured and sent them, one by one or in groups of four or five, to the collective farm centre, club or some other place where the expedition carried out the measurements. Often, waiting and getting from one place to another needed long time and great patience, as the intensity of work did not depend on us. People were friendly, particularly after hearing where the researchers had come from or why the measurements and descriptions were needed. Especially memorable was the expedition to the region of the Ob River. During the long train rides, we received quite a thorough overview of Western Siberia and its people. When we reached the measuring station, we were pleasantly surprised – about a dozen Mansi were sitting quietly in a row (differently from, e.g., Tartars who constantly expressed themselves in a good-humoured but still quite noisy way). We started by offering common words like *jōgi* (river), *kuu* (moon) or *vesi* (water), and they livened up. They also had similar words! When we had introduced to them the aim of the expedition and the character of work, their attitude to us became very friendly. Both Mansi and Khants were happy that they had distant and great linguistic relatives. Our expedition was met in a warm and friendly way everywhere, even at the measuring station that was set up in the hold of a riverboat on a tributary of the Ob River. They came there in their beautiful folk costumes made of reindeer fur. Work was done to the accompaniment of folk music, and although the room was somewhat dark, everything got done. We also had to stay overnight on the cold iron floor of the hold. With a sheet of plastic instead of the mattress, the sleeping place even felt soft.

THE MEASURED PEOPLES

As a result of nearly a quarter of century's work, a total of 133 ethnic and territorial groups were studied. These included representatives of 22 ethnicities: from Finno-Ugric peoples – Estonians, Izhorians, Finns, Karelians, Vepsians, Sami, Transcarpathian Hungarians, Erza and Moksha Mordvinians, Terjuhan (a group of Mordvinians who have switched over to Russian), Karatai (a group of Mordvinians who have switched to the Tartar language), Mari, Udmurts, Bessermen (an Udmurt-speaking ethnic group of indistinct origin), Komi-Permiaks and -Zyrians, Mansi, Khants) (a total of 112 groups, 10,448 persons) and for comparison their neighbouring Indo-European peoples – Finnish Swedes and Russians (9 groups, 1,022 persons) and Turkic peoples – Chuvash, Tatars and Bashkirs (12 groups, 1,181 persons). The mean size of a group was approximately 100 people. In total, 14 anthropometric and 32 anthroposcopic characteristics were measured on 12,651 people.

K. Mark published some generalizing overviews even before the collection of materials ended [8, 14]. Associating her large anthropological material with archaeological and linguistic data, K. Mark wrote the book *Zur Herkunft der finnisch-ugrischen Völker vom Standpunkt der Anthropologie* [7] and, in 1975, a book on the anthropology of Baltic-Finnic peoples [15]. She wrote a number of studies on the anthropology of several Finno-Ugric peoples [6, 9]. The full bibliography of K. Mark's works has been published earlier [16]. Thus, she presented her conception about the formation of the anthropological types of Estonians relying on anthropological, archaeological and other adjacent sciences as early as around 1955 and for Finno-Ugric peoples in the 1960s and 1970s.

She continually devoted her greatest attention to the ethnic history of Estonians.

In the 1970s the Institute of History started, at K. Mark's initiative, population genetic and odontological studies from the aspect of ethnic anthropology. The data were published in the monograph *Eestlaste antropoloogia seoses etnogeneesi küsimustega (Anthropology of Estonians in Connection with the Problems of Ethnogenesis)* [11], in which K. Mark examines Estonians' somatology comparing it with that of the ethnic minorities of Estonia in the 1930s as well as with other peoples. She also discusses the problems of ethnic formation of Estonians connecting the versatile anthropological material with data from archaeology and language history.

Therefore, one can say, that the Estonian anthropologists Juhan Aul and Karin Mark (as well as her colleagues), based on extensive data about Estonians and many neighbouring peoples, have analysed and established the taxonomic

similarity concerning both the internal anthropological-genetic structure and historically based linkages with other populations.

From the anthropological point of view, the work of Aul and Mark has made Estonia one of the most thoroughly studied countries in Europe.

While compiling her monograph *Origin of Finno-Ugric Peoples based on Anthropological Data*, K. Mark analysed the collected materials meticulously; unfortunately, she was not able to bring her work to the end. She passed away in 1999, and her work remained unfinished.

As K. Mark's material had attracted interest in Estonia as well as abroad, a distinct need arose to continue her work. Therefore, the editor decided to revise the completed parts of K. Mark's monograph and prepare them for print. Her primary aim was to publish the factual data assembled by K. Mark as her life's work, making them available for experts. Although K. Mark had drawn ethnogenetic conclusions in her studies of various peoples, the parts of the remaining manuscript (available for the editor of the book) lacked a chapter on the ethnic formation of the peoples studied. This is the reason why the original title of K. Mark's monograph was changed.

As K. Mark's monograph lacked a concluding chapter dealing with ethnogenesis, the editor compiled the final chapter "Anthropological types and their position in the system of races", which is based on the treatment of the system of races in K. Mark's earlier published monographs [7, 15]. This compares descriptive facial features (eight descriptive features) of ethnic groups and peoples according to the index of Mongoloidness [7]; it also presents a comparison of eye and hair colour according to the pigmentation index.

So, the unique dataset and its analyses by K. Mark, which provide a complete overview of Finno-Ugric peoples' anthropology, has been published as

Karin Mark. *Physical Anthropology of Finno-Ugric Peoples. Based on manuscript. Compiled, enlarged and edited by Leiu Heapost. Estonian Academy Publishers, Tallinn University Institute of History. Tallinn, Estonia, 2014.* Hardback. In Estonian, extensive summaries in English and Russian. Format 168×240, 542 pp. ISBN 978-9985-50-427-7.

The book contains a preface, an introduction and four chapters: 1. Earlier anthropological research, 2. Material and methods, 3. Ethnic and geographical variability of somatological features, and 4. Anthropological types and their position in the system of races.

The third chapter of it is the most extensive. It gives the statistical parameters and comparative analyses of 42 somatometric and somatoscopic traits (pigmen-

tation traits, stature, measurements of head and face, descriptive traits of face). Ethnic and geographical variability, internal variability rate of features among every 22 studied ethnicities (with 133 groups) in comparison with the same of the other studied peoples are presented.

The data are presented in Tables I–XLIII [10: 235–408]. Data and comparative analyses are also given on 22 summative ethnic groups. Data are presented in 47 text tables and graphically in 104 figures.

Comparative analysis of the data reveals historically and territorially developed morphological-genetic structure of the peoples studied.

The studied somatological, especially somatoscopic, features of Finno-Ugric peoples vary rather greatly. On the one hand, among the peoples studied by K. Mark, the characteristics of the Europoid great race are most clearly revealed in Finnish Swedes, particularly in Åland. They are characterized by strong growth of the beard, strong horizontal profile of the face, weakly prominent cheekbones, horizontal position of eyeslits, very rare occurrence of the epicanthus, high, prominent nasal bridge and very small percentage of upper lip procheilia. In these respects, the peoples similar to Finnish Swedes are the Volga Russians and, among the Finno-Ugric peoples, part of Erza Mordvinians, Western Finns and Western Estonians.

On the other hand, compared to other Finno-Ugrians, the more eastern features are most clearly manifested in Ob Ugrians (Khants and Mansi): relatively weak growth of beard, flattish face, strong cheekbones, often slanted eyeslits (with an upward lateral corner), greater frequency of epicanthus, lower and flatter nasal bridge and more frequent procheilia. (However, Ob Ugrians cannot be considered typical representatives of the Mongoloid great race).

In comparison with the above mentioned, other Finno-Ugric peoples occupy an intermediate position in their descriptive somatological features, tending to be more similar to Europoids [10: 463].

One can confidently say that our anthropologists, headed by Juhan Aul, and his student and colleague Karin Mark, especially with her major project concerning the anthropology of all Finno-Ugric peoples, have made a unique contribution to the culture of our nation as well as to worldwide science.

In conclusion one may say that the content of the book is based upon the results of anthropological data collected by Mark from 1955–1976 from Finno-Ugric peoples as well as from neighbouring Indo-European and Turkic peoples. It contains data on 40 anthropological characteristics and their analyses about approximately 13,000 individuals belonging to 133 ethnic groups representing

22 ethnicities. The work is unique by its scope and scientific reliability; it is a historical record containing anthropological data of all Finno-Ugric peoples which are comprehensively analysed in the context of Eurasia, collected within a certain time period by Mark in person by her uniform programme and methods. The book is richly illustrated with tables, figures and photos. The book is in Estonian, supplied with extensive summaries in English and Russian; lists of tables, figures and photos are also given in English and Russian.

The book can be of interest to anthropologists, human biologists, historians, geneticists, physicians, ethnologists, geographers, natural, social, cultural scientists, philosophers, genealogists etc.

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