

## **ON THE BACKGROUND TO KARIN MARK'S MONOGRAPH *FINNO-UGRIC PEOPLES PHYSICAL ANTHROPOLOGY* (2014)**

(For the 200<sup>th</sup> anniversary of defence of Karl Ernst von Baer's doctoral thesis  
*Estonians' Endemic Diseases*)

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### **ABSTRACT**

This article describes how Karin Mark's (1922–1999) monograph *Physical Anthropology of Finno-Ugric Peoples*, a bulky and beautifully designed book, (Tallinn: Academy of Sciences Press and Institute of History, Tallinn University, 2014, 542 pp.), reached publication.

For better understanding of the background, short summaries are given of the research activities of three major Estonian anthropologists – Prof. Juhan Aul, Karin Mark and Leiu Heapost.

When analysing the materials collected from 1955–1976 and preparing her life's work for print as *Origin of Finno-Ugric Peoples According to Anthropological Data*, K. Mark passed away, and the book was unfinished. Only the unique collections of materials and manuscripts based on their analysis remained.

Based on these, Leiu Heapost began to compile, enlarge and edit K. Mark's monograph that by today has been published under the new title. Why did L. Heapost decide to do it, what were her aims, by which principles was she guided, where did she consider it necessary to make corrections and additions, etc.? Answers to all of this can be found in the materials L. Heapost included in the monograph compiled by her.

It is certain that the unique materials collected by K. Mark and published 15 years after her death open new prospects for researchers for further in-depth studies of the theme.

**Keywords:** *Juhan Aul; Karl Ernst von Baer; Karin Mark; Physical Anthropology of Finno-Ugric Peoples; Leiu Heapost*

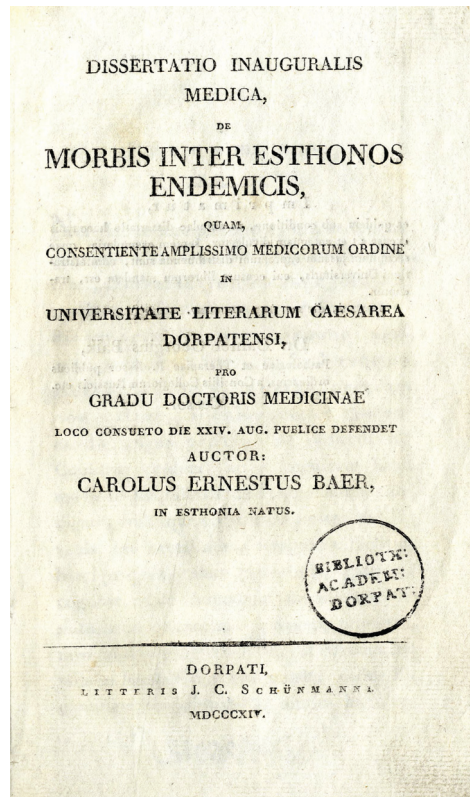
Although a relatively great amount of anthropological materials on Finno-Ugric peoples have been published and the oldest research dates back to the early 19<sup>th</sup> century, not all the peoples have been sufficiently covered by this discipline [7].

The greatest amount of anthropological data is available on Estonians. For more than two centuries, staff members and graduates of the University of Tartu have conducted various physical anthropological studies on Estonians. All of this began with the defence of the doctoral thesis *Estonians' Endemic Diseases* by Karl Ernst von Baer, who became a scientist of world renown, at the Imperial University of Dorpat (now the University of Tartu) on 29 August 1814. His thesis was the first to give detailed descriptions and assessments of Estonians' (men's, women's, children's) body build and appearance. Therefore, his paper can be considered the beginning of Estonians' anthropological research [11].

In the second half of the 1920s, Estonians' systematic anthropological research began, pioneered by Juhan Aul (1897–1994), the future Professor of Zoology at the University of Tartu. Before him, Estonians' anthropological research had been relatively scanty; even wrong ideas about their physical development had spread in the world.

J. Aul began anthropological research as a student in summer 1927. He studied the local inhabitants of Sõrve Peninsula (area more than 180 km<sup>2</sup>) which is part of Saaremaa (area almost 2700 km<sup>2</sup>), the largest island of Estonia. He measured 472 male and 673 female inhabitants of Sõrve aged 12–60 years.

During more than 40 following years, he, in person, conducted detailed measurements on more than 50,000 people of different ages. In addition to Estonians, he



**Figure 1.** Front cover of Karl Ernst v. Baer's doctoral theses. Dorpat (Tartu), 1814. The defence of the thesis actually took place on 29 August, not on 24 August like printed on the front cover.

also studied other ethnic groups living in the territory of Estonia and the neighbouring peoples. He recorded for science the anthropological features of Izhorians and Votians, who have become extinct by now [8].

J. Aul summarised the anthropological data of Estonians collected from 1932–1969 in three monographs. *Estonians' Anthropology* (1964), which deals only with Estonian men, was published in Russian by the 150<sup>th</sup> anniversary of defence of K. E. v. Baer's doctoral thesis.

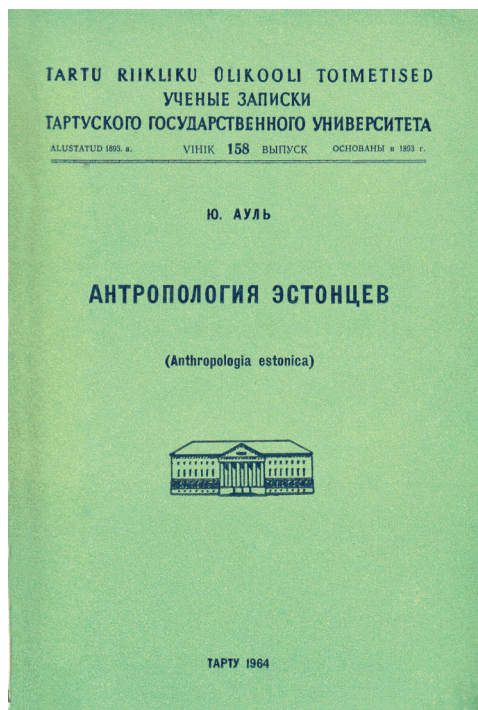
*Estonians Women's Anthropology* (1977) was published by J. Aul's 80<sup>th</sup> birthday and *Estonian School Students Anthropology* (1982) by his 85<sup>th</sup> birthday [11, 1, 2].

In these books, 64 anthropometric characteristics and indices were used by J. Aul for the anthropological characterisation of more than 15,000 Estonian men aged mostly 22 years, 52 characteristics and indices for more than 1000 Estonian women aged 20–30 years, and 36 characteristics and indices for more than 30,000 school students aged 7–18 years (14,862 boys and 15,195 girls).

The descriptive characteristics assessed by him included the eye and hair colour of Estonian men, women and schoolchildren, the nose profile of men and women, and the development of schoolgirls' breasts.

To facilitate systematic anthropological research, J. Aul founded the Anthropology Section of the Estonian Naturalists' Society in April 1939. The Section has been active to the present.

J. Aul headed the Anthropology Section for a remarkably long time, 55 years and four months. During this time, the board of the Section included: from 1939–1940, V. Üprus as Vice-chair and S. Kreek as Secretary. The data about



**Figure 2.** Front cover of J. Aul's monograph *Антропология эстонцев* (*Estonians' Anthropology*). Below, the title has been given in Latin (*Anthropologia estonica*), which in English means "Estonian Anthropology". Tartu, 1964.

1941–1957 are missing. From 1958–1959, Secretary was E.-M. Kirhaiding, from 1960–1962 A.-L. Tassa and from 1963–1994 L. Heapost.

From 1994–1995, L. Heapost headed the Anthropology Section in the capacity of Secretary. From 1996–2004, when she was Chair of the board of the Section, Secretary was G. Veldre. On 21 April 2004, G. Veldre became Chair of the board of the Anthropology Section, and she has held this position until now [5].

Prof. J. Aul's contribution to Estonian anthropology was continued by his students, primarily by Karin Mark (1922–1999) and Leiu Heapost (1936), and by representatives of many other sciences who have been interested in anthropology.

While J. Aul thoroughly studied mostly Estonians' somatological characteristics, K. Mark devoted herself to the studies of Estonians' ethnic history.

In 1949, Karin Mark (1922–1999) successfully defended her diploma thesis *Paleoantropoloogilisi andmeid Eesti NSV ja selle idapoolsete piirialade noorema rauaaja kohta* (Palaeoanthropological Data on Early Iron Age in the Estonian SSR and its Eastern Bordering Areas) under the supervision of J. Aul, who held the position of an associate professor then [9].

K. Mark continued her postgraduate studies supervised by the Moscow anthropologist Georgi Debets (1905–1969) and defended her Candidate's thesis on Estonian palaeoanthropology there in 1953.

Thereafter, K. Mark worked for the Archaeology and Ethnology Sector in the History Institute of the Estonian Academy of Sciences in Tallinn until retirement in 1986.

In the 1950s, K. Mark also started broader somatological research, participating in the joint expedition of the Baltic states from 1952–1954.

The collection *Estonian People's Ethnic History* (Eesti rahva etnilisest ajaloost), published in 1956, includes K. Mark's article "Questions of Estonian people's ethnic history in the light of anthropology" („Eesti rahva etnilise ajaloo küsimusi paleoantropoloogia valgusel"). In 1959, the researchers who published their works in the collection received the Estonian SSR State Award [6].

Thereafter, K. Mark set herself the aim of studying the anthropology of all the peoples belonging to the Finno-Ugric language family. From 1955–1976, she arranged annual expeditions, collecting anthropological material from Finns, Sami, Karelians, Vepsians and Izhorians in the north and Transcarpathian Hungarians in the south. In the east, however, 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. In Estonia, she continued collecting material until 1980.

As a result of nearly a quarter of century's work, approximately 13,000 people were measured. In addition to Finno-Ugrians, representatives of their neighbouring peoples were researched for comparison. A total of 133 ethnic and territorial groups were studied, which included representatives of 22 ethnicities.

During the expeditions, all measurements were taken and descriptions written by K. Mark in person, thus avoiding the differences in measuring technique, which are inevitable in the case of different researchers.

She published some generalizing overviews even before the collection of materials ended.

She continually devoted the greatest attention to the ethnic history of Estonians. In the 1970s, she initiated studies of blood groups, dentition and some other features of Estonians from the viewpoint of ethnic history.

In 1994, based on the collected material, a joint monograph *Eestlaste antropoloogia seoses etnogeneesi küsimustega (Anthropology of Estonians in Connection with the Problems of Ethnogenesis)* was published. In its conclusion, K. Mark explained the ethnic formation of Estonians connecting the versatile anthropological material with data from archaeology and linguistics.

K. Mark's monograph *Origin of Finno-Ugric Peoples based on Anthropological Data*, which she created on the basis of her most extensive material, remained unfinished, as she passed away in 1999 [7].

Today, however, it can be said that in 2014, K. Mark's monograph *Physical Anthropology of Finno-Ugric Peoples*, a beautifully designed bulky book on 542 pages, was published in Tallinn.

This happened by the 200<sup>th</sup> anniversary of the defence of the doctoral thesis *Estonians' endemic diseases (1814)* by K. E. von Baer, a graduate of the Faculty of Medicine at the University of Tartu, one of the most renowned natural scientists of the 19<sup>th</sup> century, the founder of modern embryology and the discoverer of the ovum of mammals, including humans (1826).

The front cover of the book features a photo by Vello Kadakas from the expedition to Mari El in 1959 where the interpreter and guide Dmitri Kazantsev talks to Mari women. The bottom part of the upper fourth of the cover picture includes the title of the book in Estonian and, under it, on the left, the first name and surname of the author.

Below that, on the right, above the heads of the people on the photo, it is printed: Based on the manuscript, compiled, enlarged and edited by Leiu Heapost.

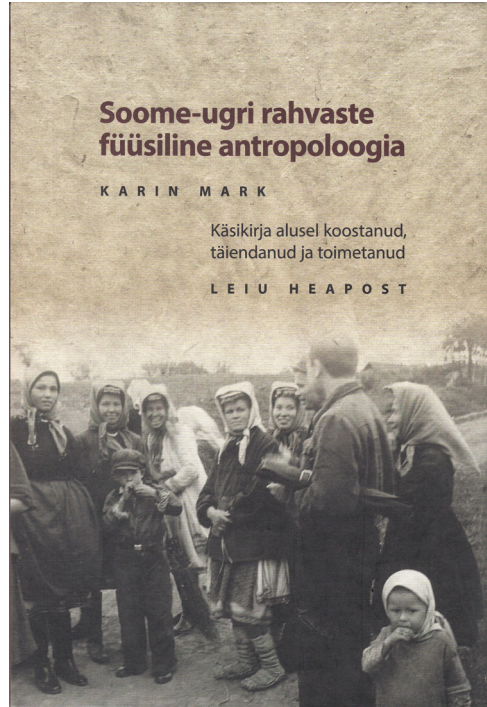
The monograph has three title pages with the text similar to the front cover, respectively in Estonian, Russian and English.

The bulkiest part of the book is in Estonian, on pages 7–233. It includes the contents (pp. 7–8), the preface (9–12), the acknowledgements (12), the introduction (13–17), an overview of earlier anthropological research on the problem (18–21), material and methods (21–45), ethnic and geographical variability of somatological features (46–219), anthropological types and their position in the system of races (220–233). Within the Estonian text, there are 47 text tables and 21 photos. It is followed by 43 tables on the descriptive and measured characteristics and indices (pp. 235–408), references (409–413), abbreviations (414), the short article “Karin Mark and statistical analysis of anthropological material” by Ene-Margit Tiit, Professor Emeritus of the University of Tartu (415–416), and a comment on the Mongoloid addition by Associate Professor of Genetics Mart Viikmaa (417–418).

These are followed by summaries in English and Russian, respectively on pp. 419–478 and 479–542. The structure of both summaries is similar to the Estonia part of the monograph.

This is how K. Mark’s major work *Physical Anthropology of Finno-Ugric Peoples* was completed 15 years after her death compiled, enlarged and edited by L. Heapost.

Leiu Heapost graduated from Tartu State University in 1963, successfully defending her diploma thesis *On Physical Development of School Students of Rapla District*, written under the supervision of Professor of Zoology J. Aul. Thereafter, she worked at the Department of Zoology of Tartu State University.



**Figure 3.** Front cover of K. Mark’s monograph *Physical Anthropology of Finno-Ugric Peoples* (Tallinn, 2014, 542 pp.) [7].



From 1970, she continued her studies of anthropology as postgraduate student at the History Institute at the Estonian Academy of Sciences. In 1976 in Tartu, she defended her Candidate of Biology Thesis *Physical Development of School Students of Tallinn*, supervised by Prof. J. Aul. From 1974, L. Heapost has been on the staff of the History Institute of the Academy of Sciences. She has filled various positions from junior research fellow to leading research fellow. Not long ago, she was still active at this Institute as a senior research fellow, although the Institute itself has been part of Tallinn University since 2005.

Leiu Heapost is the most versatile of our anthropologists. She has studied Estonians' and several other people's somatology, age-related anthropology, palaeoanthropology and population genetics.

L. Heapost's studies have made a remarkable contribution to the fact that, from the anthropological viewpoint, Estonians are one of the most diversely and thoroughly studied peoples in the world [4].

Thanks to his teacher, Prof. J. Aul's diligent anthropological work from 1927–1940, Estonia had become anthropologically most thoroughly researched country even before the beginning of World War II, as can be seen in an interview with J. Aul in the newspaper *Eesti Sõna* in December 1942 [3].

Below, we present an overview of why L. Heapost decided to start editing the original manuscript that had remained from K. Mark, what were her aims, by which principles was she guided, where did she consider it necessary to make corrections and additions, etc.

As K. Mark's material has attracted interest in many researchers (G. A. Aksyanova, Ye. A. Aksyanov, V. Ye. Deryabin, A. Thoma), the editor of the present edition L. Heapost decided to revise the parts of the monograph written by K. Mark and prepare them for print.

The editor's primary aim was to publish the factual data assembled by K. Mark in her lifetime and make them available to experts.

Although K. Mark has drawn ethnogenetic conclusions in her studies about various peoples, the remaining manuscript 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.

While editing the manuscript, the editor L. Heapost retained the calculation methods used by K. Mark. Although, her methods date from the pre-computer era, the calculations have been done carefully and with sufficient precision.

The chapters are presented in unchanged form; they have only been edited. As K. Mark's monograph lacked a concluding chapter dealing with ethnogenesis, the editor L. Heapost 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 monographs published in 1970 and 1975.

This chapter compares the descriptive facial features of ethnic groups and peoples according to the index of Mongoloidness; it also presents a summative comparison of eye and hair colour according to the pigmentation index.

The figures are based on the data of tables and draft drawings. The graphs describing the correlations between the characteristics have been made on the basis of corresponding statistical data. The bibliography has been compiled using the references in the text with some later additions.

An effort has been made to retain K. Mark’s terminology and division of variables into classes of magnitude.

The English and Russian summaries, while describing the distribution of variables, present only the part dealing with summative comparison between ethnic groups. Detailed distribution of separate variables within ethnic groups has been presented in tables and figures.

The publication of Karin Mark’s study became possible with the financial support of the Estonian Academy of Sciences, the Estonian Science Foundation, the Estonian Cultural Foundation, the Council of the Kindred People’s Programme, Tallinn University Research Foundation and the Institute of History.

The editor Leiu Heapost expresses sincere thanks to everyone who contributed to the completion of this book: Karin Mark’s heir Kai Tamm kindly donated Karin Mark’s archive to the Institute of History; her colleagues Lembit Jaanits, Ants Viires and Raili Allmäe helped to find the necessary materials in K. Mark’s archive and to process them; Academician Richard Villems and Emeritus Professor Ene-Margit Tiit encouraged her to edit the manuscript and gave their valuable advice; Toomas Mägi took great efforts at digitising the original figures and Anu Kase corrected them.

Great thanks go to the editor of the manuscript Lembit Jaanits, translator and editor of the English text Ilmar Anvelt, editor of the Russian text Einar Värä, translators of the Russian text Lilja Heapost and Igor Tõnurist. The editor also thanks Marje Joalaid and Peeter Päll for their advice on place names.

She thanks all the other kind people who contributed to the completion of the book in one or another way.

On behalf of Karin Mark, the editor Leiu Heapost thanks the thousands of local people whom she studied during her extensive work, all the organisations, institutions, and persons who helped K. Mark to collect the material and assisted her on her expeditions [7].



It is a rooted tradition that, before Independence Day (24 February), the Republic of Estonia awards decorations to its citizens and foreigners. In total, there are six state decorations, established from 1919–1995, in order to recognise the achievements in one or another area or services to the Estonian people. Before the 98<sup>th</sup> anniversary of the Republic of Estonia, on 4 February 2016, President Toomas Hendrik Ilves signed the decision to award state decorations to 99 people. Among them, Leiu Heapost, long-time senior research fellow of Tallinn University, received the Order of the White Star of the 5<sup>th</sup> Class for her influential activities as the founder of systematic studies of Estonians' population genetics [10].

On 17 March 2016, the Anthropology Section of the Estonian Naturalists' Society and the Centre for Physical Anthropology at the University of Tartu arranged a festive meeting in the house of the Naturalists' Society (Struve 2, Tartu) to mark the 80<sup>th</sup> birthday of Leiu Heapost, a recipient of the White Star Order of the 5<sup>th</sup> class. The reason for arranging this event was L. Heapost's long-time activity as Secretary of the Anthropology Section from 1963–1995 (for 32 years) and Chair of the Section from 1996–2004 (for 8 years), all of this in addition to her main occupation, first in Tartu and later in Tallinn [5].

The agenda of the meeting included opening remarks from Oive Tinn, President of the Estonian Naturalists' Society. The jubilee celebrant L. Heapost spoke about how she became an anthropologist. Presentations were made by Mart Viikmaa – “Ethnic anthropology at a crossroads”, Jaan Kasmel – “On studies of Estonian school students' physical development in diploma theses of the Department of Zoology of Tartu State University from 1958–1970”, Gudrun Veldre – “The Anthropology Section of the Naturalists' Society from 1963–2004”, Peeter Hõrak and Markus Valge – “The human body as a carrier of information: Juhan Aul's heritage in the epidemiological and evolutionary context”. This was followed by discussion, congratulations to the Leiu Heapost and the conclusion of the meeting.

We are greatly thankful to Leiu Heapost for sharing the materials she used in compilation and publishing of K. Mark's monograph “Physical Anthropology of Finno-Ugric Peoples Physical Anthropology” for writing the current overview.

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