

БЪЛГАРСКА АКАДЕМИЯ НА НАУКИТЕ
И-Т ПО ЕКСПЕРИМЕНТАЛНА МОРФОЛОГИЯ,
ПАТОЛОГИЯ И АНТРОПОЛОГИЯ С МУЗЕЙ
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СОФИЯ

AFFITUDE OF REVIEWER

by Professor Nina Atanassova, PhD, DSc, Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences

Re: Defense of the PhD thesis entitled DERMATOGLYPHICAL CHARACTERISTICS OF THE BULGARIAN POPULATION FROM CENTRAL WESTERN BULGARIA, author Paraskova, Nadezhda Venetsieva in the professional field 4.3. Biological Sciences, specialty "Anthropology" in the Department "Anthropology and Anatomy " of the Institute of Experimental Morphology, Pathology and Anthropology with Museum, Bulgarian Academy of Sciences

The PhD thesis by Nadezhda Paraskova is addressed to a problem of national importance for ethnic anthropology and in particular ethnic dermatoglyphics in Bulgaria. The work was originally conceived, having in mind the insufficient studies of the modern population of Central Western Bulgaria (CWB) regarding anthropological, in particular dermatoglyphic studies.

The comparative approach applied in the present thesis provides new and summarized data for the whole region of the CWB, which has specific characteristics and is therefore distinguished by ethnographers as a "Shopska ethnographic area". The dissertation is precise and professionally performed with the application of an adequate anthropological approach, including a classical method of determining dermatoglyphic fingerprints and modern biostatistical analysis.

The dissertation is written on 183 pages and contains the usual sections in a balanced ratio between them, logically dominated by the part "Results and discussion" (101 pages), marked by the author "Analysis and discussion of the results".

The overview is short (23 pages), purposefully developed and well structured, having a clear and concise style and presents the necessary information about classical and modern research in ethnic dermatoglyphics in general and in Bulgaria in particular. This can be seen from the impressive number of used literary sources - 262 in number, of which 130 in Cyrillic and 132 in Latin. Seventy sources are from 2000, which shows that the Mrs Paraskova is familiar with the literature on the subject from the last two decades. More attention could be paid to the work of Sokal et al, 1973, which, through advanced mathematical analysis, proves Hitt's observations. (p. 20).

The short conclusion at the end of the literature review makes a good impression, in which the author has posed the main problem in conducting dermatoglyphic research in Bulgaria of an ethical nature. And in this respect, Mrs Paraskova deserves admiration for the tremendous efforts and persistence in the work done. A brief statement of the problem done by the author demonstrates that the previous studies were on separate reference groups without looking for connections and comparisons between them. Hence, Nadezhda Paraskova logically deduces that comprehensive comparative study is needed to provide a database for future comparative analyzes with other Bulgarian and foreign populations, which will shed light on the ethnoanthropological status of the Bulgarian population by CWB and the country. The goal is briefly formulated, as well as eight tasks for its implementation.

The description of the "Material of the study" shows that the conducted studies were performed on 1600 individuals (800 men and 800 women) from eight local populations of CWB, and 3200 palm and 16000 fingerprints were processed. This definitely ensures obtaining reliable data processed through modern biostatistical analysis, including primary (determination of 5 indices) and secondary data processing using specialized statistical programs ("PAST", "DERM", Principal Component Analysis, Correlation Analysis). The section on Biostatistical Analysis could be combined with the section "Material and Methods", as biostatistical analysis is an integral part of the research methods in ethnic dermatoglyphics.

In the section "Analysis and discussion of the obtained results" a large volume of research material is presented - 8 different territorial groups, which are first described in detail separately for both sexes, and then a comparative analysis with research data from other authors in the region - 8 more territorial groups. This comparative analysis is particularly valuable because, much work in anthropology done before (both living population and bone material, both in the field of physical development and in the field of ethnic anthropology) describes the reference group for itself without making a comparison. The data in the PhD thesis are presented in 123 tables and illustrated in 39 figures.

A main contribution in the PhD thesis is the use of the analysis of the main components (Principal Component Analysis), which has not been conducted in our country so far on ethnic dermatoglyphics research. The analysis of the main components also includes data for territorial groups from other parts of Bulgaria, which increased the number of compared samples to 27. The author's original analysis about relationship between territorial status and dermatoglyphic features is extremely valuable, as it also includes data on territorial groups from other parts of Bulgaria (27 in total). It should be noted that Mrs Paraskova has done original comparison applying PCA method of the studied territorial groups from the CWB and from Bulgaria with dermatoglyphic data for other ethnic groups outside Bulgaria.

The author presents for the first time an integrative PC analysis (IPCA) of dermatoglyphic and odontological features of the population of the CWB. The comparative analysis is done using data from both the present study and studies by other authors (Minkov, Tosheva, 2006; Tosheva, Minkov, 2009).

The conclusions are formulated extensively and rather represent a brief summary of what is stated in the section "Analysis and discussion of the results obtained". There are a total of 16, formulated in two directions "Taxonomic analysis of dermatoglyphic features" and "Taxonomic analysis of territorial and ethnic level of differentiation by dermatoglyphic features". Eight scientific contributions are presented, the last two rather outlining the perspective for using the data obtained by the author for future comparative studies. The first four contributions are of an original nature.

The dissertation ends with a short conclusion in which its "essence" is formulated. The main factor for the formation of the anthropological composition of contemporary Bulgarian groups from Central Western Bulgaria is most probably the interaction between the northern and southern variants of the Western Eurasian formation (the Europeans). The integrative analysis of the dermatoglyphic and odontological features with the geographical location of the groups on the west-east axis, probably objectifies intensive migration processes during the historical past of the Bulgarian population (more clearly expressed in the male sex). Finally, the author shares an

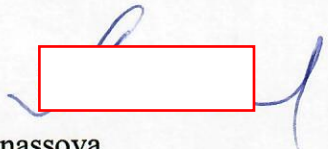
idea for future research on the somatological features of the population of the study area, which could shed more light on the ethnogenesis of the Shopska ethnographic group from Bulgaria.

On the topic of the dissertation are published 3 scientific publications in English, one is indexed in the Web of Science journal. The results are presented at 4 scientific forums, 3 of which at international forums abroad.

It is evident from the presented reference that Mrs Paraskova has fulfilled the educational program of the Educational Center at Bulgarian Academy of Sciences having collected 430 credits at a required minimum of 250. She has fulfilled the minimum requirements of IEMPAM for acquiring PhD degree.

Conclusion: the volume and quality of the conducted complex and detailed anthropological research on the dermatoglyphics of the Bulgarian population from Central Western Bulgaria define the dissertation of Nadezhda Paraskova as a completed and precisely implemented scientific work of fundamental and applied importance. I am impressed by the high scientific level of the dissertation, its writing and design. The volume and quality of work and the successful implementation of the educational and scientific program fully meet the criteria of the ZRAS of the Republic of Bulgaria and the regulations for its implementation. With the acquired knowledge and skills Nadezhda Paraskova is a scientist capable of independent research. In connection with the above, I am fully convinced to give a positive assessment of the dissertation on "Dermatoglyphic characteristics of the Bulgarian population of Central Western Bulgaria" and recommend the members of the Scientific Jury to vote "YES" awarding the educational and scientific degree "Doctor" by Nadezhda Paraskova.

25.09.2021


Professor Nina Atanassova