

## Anthropological Characterisation of Balkanjis from Razgrad District

*Racho Stoev*

*Institute of Experimental Morphology, Pathology and Anthropology with Museum of BAS*

\* Corresponding author e-mail: rastesto@abv.bg

Anthropological data from 126 adult men of the Bulgarian ethnographic group Balkandjis, collected in 1975 in anthropological expedition in the district of Razgrad are processed statistically and analyzed. The results show a population with mean height 168,5 cm, cephalic index 84,4%, morphological face index 86,7%, nasal index 64,3%, mixed and variable pigmentation (average eye colour 6,5 after Martin scale, mean hair color 49,8 after Michalski scale or T after Fischer-Saller). The individual analysis presents the prevalence of Subnordic, Dinaric and Alpine anthropological types, the elementary analysis – a combination of Nordic, Lapponoid and Armenoid elements. These anthropological characteristics place the population of Balkandjis among the Centraleuropean populations. The Balkandjis of Razgrad district are relatively close to the Bulgarians from Middle North Bulgaria, former Botevgrad county or Eastern Sofia district.

*Key words:* Balkandjis, Michalski's methods, Razgrad district, ethnic anthropology, Centraleuropean populations

### Introduction

National wide ethnoanthropological surveys have been conducted in Bulgaria – by Acad. Stefan Vatev around 1899, by Acad. Methody Popov in 1938-43, by Aris Poulianos in 1963 and the National Anthropological Program in 1989-1993 [11, 12, 17, 18]. Their results show that the anthropological structure of the present Bulgarian population is very heterogeneous in territorial aspect. Unfortunately, the results from these studies are published only at national and regional level. Only few data are published on local level [11, 17]. The survey of Krum Dronchilov [2] perhaps the best exact and best known outside Bulgaria, presents anthropological data on local level, but does not cover the whole territory of Bulgaria. The materials of the extensive local anthropological studies of Peter Boev, Luchia Kavgazova and their collaborators, collected during the 1970s and 1980s are only partly published [4, 5, 6]. Resent review and analysis of some incomplete data of Methody Popov study also support the idea that more attention to the investigation of the anthropology of local Bulgarian populations should be paid [13].

That's why the author of this paper in the last years processed statistically and analyzed data of few local populations from the rich collection of unpublished archive materials [14, 15].

One of the ethnographic groups of Bulgarians are the Balkanjis (Mountaineers). They originally inhabited the Northern branches of Middle Stara Planina from about Etopole to Elena and spoke Balkan Eastern Bulgarian dialects. Characteristic for them are the Balkan house, black men's traditional costume, sukman women's costume. Because of shortage of arable land they early turned to crafts, manufacturing and trade. In 19-th century and especially after the establishment of new Bulgarian state (1878) they en masse migrated to the plains (**Fig.1**). They actively participated in the formation of Bulgarian nation and state and the Bulgarian language standard is based on one of their dialects. The social position of the women among them was higher than in other Bulgarian ethnographic groups. Because of this and because of the lack of arable land they something early accepted the limiting of the family size. [7, 16, 17]. Anthropologically they are higher than average Bulgarians, more brachycephalic, with mixed pigmentation [11, 17].

The present paper is dedicated to the anthropological characteristic of Bulgarians from the ethnographic group Balkandjis from Razgrad district, where their ancestor migrated from the Middle Stara Planina region.

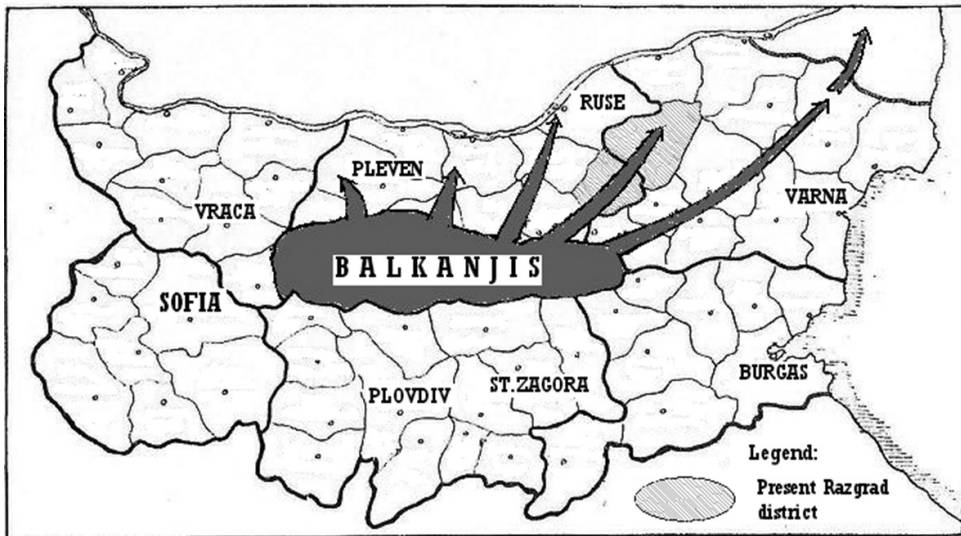


Fig. 1. Migrations of Balkandjis to the plains – 19<sup>th</sup> century and early 20<sup>th</sup> century

## Materials and methods

Anthropological data from the archives of the former Department of Ethnic Anthropology of the former Institute of Morphology of BAS are processed statistically and analyzed. They include individual data of 126 adult men of the Bulgarian ethnographic group Balkandjis, collected in 1975 in anthropological expedition in the district of Razgrad (under the leadership of P. Boev).

The anthropological cards contain data about not only the ethnographic group but about the birth place of the parents of the investigated persons. Thus some misincluded in the group of Balkandjis persons (n = 9 of 135 in the folder) were excluded before processing and analyzing.

Only the major anthropological traits are processed and analyzed in this paper. The analysis of the anthropological structure has been made according to the methodic of Michalski [3, 8, 9, 10]. In the methodic are made some minor modifications, which are described in previous article of the author [14].

The primary examination of the crude data has shown that morphological face height and nasal height are measured from *ophrydion* and not from *sellion*, thus being too high. Since the methods of Michalski-Henzel for determining the anthropological type is based on measurements from *sellion* [3, 8, 9, 10] the usual correction of 5 mm has been made [1]. Also the hair colour has been corrected by one number in the Fischer-Saller scale (From Y to X, from X to W and so on) – otherwise the proportion of black hairs (X-Y or 70 after Michalski's scale) shall be too high for each European population.

## Results and Discussion

According to their anthropological traits and basically on the pigmentation the Balkandjis from Razgrad district belong to the populations with mixed Southeuropoid and Northeuropoid traits (**Table 1**). They are relatively tall, brachycephalic, mesoprosopic, leptorhincic population of mixed pigmentation, with relatively prominent noses (straight and convex). Eastern Eurasian traits are rare as in most Bulgarian populations.

**Table 1.** Major anthropological traits and indices in the population under study

Anthropological trait	n	M	SD	SE
Height, cm	125	168,5	6,4	0,9
Head length, mm	126	186,0	6,1	0,5
Head breadth, mm	126	157,0	6,6	0,6
Cephalic index, %	126	84,5	3,5	0,3
Bizygomathic face breadth, mm	126	139,8	7,4	0,7
Morphological face height, mm <sup>1</sup>	126	126,0	7,1	0,6
Morphological facial index, % <sup>2</sup>	126	86,7	6,5	0,5
Nose height, mm <sup>1</sup>	126	57,8	4,2	0,4
Nose breadth, mm	126	33,7	3,5	0,3
Nasal index, % <sup>2</sup>	126	64,3	8,3	0,7
Eye color after Martin, 1-16	124	6,5	4,0	0,4
Hair colour after Michalski, 10-70 (after Fischer-Saller) <sup>3</sup>	120	49,8 (T)	10,4	0,9
Nasal form after Michalski, 10-100 <sup>4</sup>	126	68,3	18,8	1,7

<sup>1</sup> – uncorrected, after correction by 5 mm shorter

<sup>2</sup> – calculated from corrected values of morphological face height and nose height

<sup>3</sup> – 10 – light blond – 70 black without brown or red nuances, after correction

<sup>4</sup> – 10 – strongly concave – 100 strongly convex

A comparison of the major anthropological characteristics of the population under study has been made with data from the studies of M. Popov in the beginning of 1940s [11] and from the National Anthropological Program in the beginning of 1990s [18] (**Table 2**). When making such comparisons one should not forget that in each of the regions included (Middle North Bulgaria, Ruse, Varna) not only Balkandjis are living, there are also other Bulgarian ethnographic groups (Polyantsi, Hartsoi, Kapantsi, Chengentsi, Vayatsi, etc.). There may also be some differences in the result of secular changes – acceleration, brachycephalization, debrachycephalization) and because of use of different scales for scopic traits. However, the similarity between Razgrad Balkandjis and the population of Middle North Bulgaria is evident.

**Table 2.** Anthropological traits in Razgrad district Balkandjis and data from some other anthropological studies

Region (district)	After [11], around 1940			After [18], around 1990			Balkandjis, 1975
	Pleven	Ruse	Varna	Lovech	Ruse	Varna	Razgrad
Height, cm	171,0	170,7	171,0	171,5	169,8	170,7	168,5
Head length, mm	188,0	188,1	188,7	190,0	189,8	189,9	186,0
Head breadth, mm	156,6	156,3	154,6	158,9	157,7	157,7	157,0
Cephalic index, %	83,3	83,2	82,0	83,5	83,2	83,1	84,4
Bizygomatic face breadth, mm	141,2	141,2	140,2	139,8	145,1	144,4	144,0
Morphological face height, mm <sup>1</sup>	127,6	127,5	128,1	128,5	126,3	126,0	126,0
Morphological facial index, % <sup>2</sup>	86,8	86,7	87,8	85,1	84,0	84,0	86,7
Nose height, mm <sup>1</sup>	59,0	58,9	58,5	57,8	56,4	56,0	57,7
Nose breadth, mm	34,1	34,1	34,0	35,0	35,0	35,1	33,7
Nasal index, % <sup>2</sup>	63,2	63,3	63,6	66,3	68,1	68,8	64,3
Eye colour after Martin, 1-16	7,0	6,4	6,6	6,1	6,1	6,0	6,5
Hair colour after Michalski, 10-70 (after Fischer-Saller)	45,8 ( <i>T</i> )	46,9 ( <i>T</i> )	45,3 ( <i>T</i> )	54,7 ( <i>U</i> )	54,6 ( <i>U</i> )	56,6 ( <i>V</i> )	49,8 ( <i>T</i> )

<sup>1</sup> – uncorrected, after correction shall be by 5 mm shorter

<sup>2</sup> – calculated from corrected values of morphological face height and nose height

The numbers in italic are just a rough estimate. Pleven administrative region in 1940-s and Lovech region in 1990s are the same geographic region – Middle North Bulgaria. Razgrad district before 1940s was divided between Ruse and Varna administrative regions (**Fig.1**), but around 1990 was part of Ruse region.

According to the typological analysis the population of Razgrad district Balkandjis is heterogeneous. Among the individual anthropological types prevail Subnordic (AL) – 24%, Dinaric (AH) – 20% and Alpine (HL) – 15% (**Table 3**) – a typical Centraleuropean combination [1, 14,15]. Eastern Eurasian admixture (AM, AZ, HM) can be traced only in 5,6% (7 persons) of the sample.

**Table 3.** Individual typological structure of Balkandjis from Razgrad district (classification of Michalski-Henzel)

Anthropological type	Symbol	N	%
Mediterranean	EE	2	1,6
Armenoid	HH	5	4,0
Laponoid	LL	1	0,8
Atlanto-Pontic (Northwestern)	AE	6	4,8
Amoritic	AK	3	2,4
<b>Dinaric</b>	<b>AH</b>	<b>25</b>	<b>19,8</b>
<b>Subnordic</b>	<b>AL</b>	<b>30</b>	<b>23,8</b>
Euromongolic	AM	2	1,6
Eurasian	AZ	1	0,8
Finnish	AQ	1	0,8
Atlantic	YE	1	0,8
Pseudoalpean	YH	3	2,4
Levantinean	BH	1	0,8
Suboriental	EK	1	0,8
<b>Litoral</b>	<b>EH</b>	<b>8</b>	<b>6,3</b>
Sublaponoid	EL	5	4,0
Subarmenoid	KH	2	1,6
Western asian	KL	1	0,8
Souteastern	EQ	2	1,8
<b>Alpine</b>	<b>HL</b>	<b>19</b>	<b>15,1</b>
Turanian	HM	4	3,2
Pseudolitoral	HQ	3	2,4
Total		126	100

In bold – anthropological types with significant (over 5%) presence)

The analysis of the elementary anthropological structure (**Table 4**) presents a pattern close to the Bulgarians of Middle North Bulgaria – combination of Nordic, Armenoid (Balkano-Caucasian – h) and Laponoid (l) elements [15]. Thus they both belong to the populations of Central Europe [1]. Other close group are the Gagauzes from Kavarna, which also present Centraleuropean characteristics [14]. Also to this group belong the populations of the Eastern part of Sofia district (materials of Krum Dronchilov [2], in processing by the author). In fact the mountain part of Middle North Bulgaria (including the Eastern parts of former Botevgrad (Orhanie) county near Etropole) is the region from which the ancestors of our local group have migrated in Razgrad district. The populations of Southern Bulgaria mostly present other anthropological characteristics and belong to other, the Atlanto-Pontian group of populations [13, 17] with prevalence of Mediterranean and Nordic elements and mesocephalic heads.

**Table 4.** Elementary anthropological structure after Michalski

Sample	n	Anthropological elements, %										Eastern complex, %	South complex, %	Formula
		a Nordic	y Cromagnoid	b Berberic*	e Mediterranean *	k Oriental*	h Armenoid*	l Laponooid	m Mongolic*	z Pacific	q Uraloid			
Balkandjis	126	29,8	3,0	0,6	11,3	3,2	27,4	22,0	1,2	0,2	1,4	24,8	56,5	ah(1e)
North Bulgaria [ 15]	226	31,2	0,6	0,9	6,1	6,7	27,3	14,2	8,1	3,3	2,0	27,2	56,4	ah(1)
Gagauzes [14]	109	31,9	2,5	2,3	10,3	6,9	18,8	21,6	0,7	0,9	4,1	27,3	52,7	al(1e)

Synonyms: Berberic = Ibero-insular, Mediterranean = Ibero-insular, Oriental = Eastern Oriental, Armenoid = Balcano-Caucasian, Mongolic ^ typical Mongoloid

Remarks: Eastern complex =  $l+m+z+q$ , Soutem complex =  $(b+e+k+h)/(a+y+ b+e+k+h)$ , formula – elements over 20% and in brackets element from 10 to 20%.

## Conclusion

The anthropological characteristics of the Balkandjis from Razgrad district place them among the Centraleuropean populations. They are relatively close to the Bulgarians from Middle North Bulgaria, Botevgrad county or Eastern Sofia district and also to the Gagauzes from Kavarna.

The results from the study are an interesting testimony of centuries of demographic and ethnographic processes in Bulgaria.

*Acknowledgements:* The author thanks Lukasz Macuga from Torun for consultations when working on these materials.

## References

1. **Cheboksarov, N. N.** The anthropological structure of recent Germans. – *Uchenye Zapiski MGU*, LVIII, 1941, 271-308 [in Russian].
2. **Dronchilov, K.** Contribution to the anthropology of Bulgarians. – *Friedr. Vieweg @ Sohn, Braunschweig*, 1914, 1-80 [in German].
3. **Henzel, T., I. Michalski.** Principles of human classification after Tadeusz Henzel and Ireneusz Michalski. – *Przegl. Antropol.*, tom XXI, zeszyt 2, 1955, 537-662 [in Polish].
4. **Kavgazova, L., P. Boev, A. I. Hadjioloff.** Morphological characteristics of highland population in Central Rhodopes. – *C. R. Acad. Bulg. Sci.*, **37**, 1984, 5, 657-659.
5. **Kavgazova, L., P. Boev.** Anthropological characteristics of Rhodope variant of Dinaric race – *C. R. Acad. Bulg. Sci.*, **37**, 1984, 5, 665-667.
6. **Kavgazova, L., Zl. Filcheva, R. Stoev.** Anthropological characteristics of the population in the western part of Smolyan region. – *Acta morphol. anthropol.*, **6**, 1987, 58-64.
7. **Kolev, N.** Bulgarian ethnography. Sofia, Science and Art, 1987, 1-291 [in Bulgarian].
8. **Michalski, I.** Anthropological structure of Poland. *Acta anthropologica universitatis Lodziensis*, **1**, 1949, 1-236 [in Polish].
9. **Orczykowska, Z.** An attempt of constructing an anthropological key on the base of classification of Michalski. – *Przegl. Antropol.*, **22**(1), 1959, 212-229 [in Polish].
10. **Orczykowska, Z.** Anthropological analysis of Tajiks from Pamir. – *Mat. Pr. Antropol.*, **46**, 1959 [in Polish].
11. **Popov, M., G. Markov.** *Anthropology of Bulgarian people*. Sofia, BAS Publ. House, 1959, 1-296 [in Bulgarian].
12. **Poulianos, A. N.** Anthropological studies on the Balkans (Bulgaria-Greece-Yugoslavia). – *Athens*, 1967, 1-157 [in Greek].
13. **Stoev, R.** Anthropological types in Bulgarian population around 1940 – regional and local level. – *Acta morphol. anthropol.*, **23**, 2016, 93-101.
14. **Stoev, R.** Anthropological characteristics of Gagauzes from Kavarna. – *Acta morphol. anthropol.*, **26** (1-2), 2019, 79-83.
15. **Stoev, R.** Anthropological characterization of few local populations of middle-north Bulgaria after archive materials from 1943/44. – *Acta morphol. anthropol.*, **26** (3-4), 2019, 94-101.
16. **Vakarelski, H.** *Ethnography of Bulgaria*. Sofia, Science and Art, 1987, 1-797 [in Bulgarian].
17. **Vatev, St.** *Anthropology of Bulgarians*. Sofia, 1939, 1-80 [in Bulgarian].
18. **Yordanov, Y., A. Nacheva, S. Torniyova-Randelova, N. Kondova, B. Dimitrova, D. Paskova Topalova.** *Anthropology of the population of Bulgaria in the end of 20<sup>th</sup> century*. Sofia, Academic publishing house “Marin Drinov”, 2006, 1-432 [in Bulgarian].