

Anthropological data about the population from the West Rhodopes

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900 men and 1076 women from the three territorial groups of the West Rhodopes constituted the subject of the study. In the analysis 13 anthropological features were included. All three anthropological types established by us among the population from the West Rhodopes enter the composition of the modern Bulgarian people and formed on a very old local anthropological Balkan substrate.

Key words: anthropological types, Dinaric type, Pontic type.

The present work is dedicated to the anthropological study of the Bulgarian-Mohammedans from the West Rhodope region. The interest to the anthropological composition of this population is determined by its population-demographic structure which has been formed under the influence of its confessional isolation. According to the studied of Iv. Georgieva and D. Moskova [4] the Bulgarian-Mohammedans from West Rhodopes are characterized with endogamous conjugal ties but excluding marriages reaching the third-cousin degree. Because of the endogamy this marital structure bears the features of a biological population in which specific for the region anthropological types have been formed. This fact determines also the great interest to the investigation on the anthropological types from an historical-ethnographic Rhodope district in a better preserved and more ancient form. As a whole the Rhodopes are poorly studied in an anthropological respect. Partial investigations with an ethnogenetic purpose have been carried out by M. Popov [6], P. Boev at al., L. Hristova [8]. These investigations contribute significantly to the construction of wholesome anthropological characteristics of the Rhodope population.

The region of the West Rhodopes stretches from the Mesta river valley to the West to the Vurbitza river to the East [5]. In the monography of M. Popov [6] a total of 150 males and 48 females from various districts of the West Rhodopes have been studied: Assenovgrad — 31 males, Smoljan — 78 males and 48 females, Zlatograd — 35 males, Devin — 1 man, Ardino — 5 men.

The aim of the present study is: 1) By a statistically significant number of persons investigated to make morphological characteristics of the studied West Rhodope population and to trace the territorial changeability of the racial-diagnostic features among the population of three territorial groups – a south-west one (Dospat-Trigrad), southern one (Smiljan) and the south-east one (the region of the village of Startsevo), 2) Definition of certain typical of the Bulgarian-Mohammedans from this region anthropological types.

Materials and methods

900 men and 1076 women from the three territorial groups of the West Rhodopes constituted the subject of the study. 415 men and 462 women were investigated from the Dospat-Trigrad region from the Smiljan one – 382 men and 491 women and from the region of Startsevo village – 103 men and 123 women. The studied contingent comprises predominantly farmers and small owners. The age of the individuals under study is between 25 and 50 years. In the processing of the anthropological material from the West Rhodopes was used the population approach. Its application in the anthropological survey of contemporary population renders the opportunity for the use of the anthropological results as an historical source since the population represents the lowest level of racial classification. In the present work an attempt is made for transition in the following degree of racial classification – the separation of the typical of the region studied anthropological types or a group of populations. This stage of the processing of the anthropological material is of great importance in the restoration of ethnical community history entering the composition of these anthropological types or groups of population.

The anthropological studies in the West Rhodopes were performed after the conventional anthropological methods [2, 6] observing the basic principles of the ethnogenetic investigation. In the anthropological study of the West-Rhodope population the geographical factor was used as a binding link between anthropology and ethnographic systematics. In the comparative-population approach the method of Penrose and of the combination polygons for summed comparison of the groups [1, 7] was used. In the analysis 13 anthropological features were included (8 presented with their absolute values and 5 indexes) and 6 scopic features as well.

Results and discussion

The data from the investigation of the head, the face and the visual evaluation of the morphological features which are not susceptible to measurement are presented in Tables 1-7. The mathematical characteristics of each feature give the possibility to get an impression of the averaged anthropological peculiarities for each territorial group. The data summed up for the three territorial groups from the West Rhodopes compared to the data of M. Popov [6] for the total Bulgarian population are presented in Table 2. The results from the investigation of the scopic features are presented in Tables 3-7 and the comparative data about certain scopic features between the summarized West-Rhodope population and the total Bulgarian one are presented in Figs 1 and 2. The greater percent of the dark hairs and with greenish-brown eyes among the studied West Rhodope

Table 1. Statistical parameters of the measured features in the groups under study

Features	Sex	Dospat-Trigrad region $n \text{♂} = 425, n \text{♀} = 462$			Smiljan region $n \text{♂} = 382, n \text{♀} = 491$			Startsevo $n \text{♂} = 103, n \text{♀} = 123$		
		\bar{x}	s	m	\bar{x}	s	m	\bar{x}	s	m
Head length (mm)	men	190,97	11,65	0,57	186,29	6,37	0,32	190,05	5,87	0,58
	women	181,48	6,49	0,30	176,26	5,82	0,26	179,77	5,60	0,50
Head breadth (mm)	men	155,26	9,56	0,47	158,42	5,44	0,28	147,17	5,14	0,51
	women	149,21	5,65	0,26	150,11	5,24	0,24	141,53	4,73	0,43
Bizygomatic breadth (mm)	men	141,67	11,78	0,58	141,14	5,24	0,27	134,02	5,95	0,59
	women	134,88	5,69	0,26	132,54	4,82	0,22	128,77	4,88	0,44
Mandibular width (mm)	men	110,61	9,43	0,46	108,78	6,70	0,34	105,76	5,80	0,57
	women	102,92	8,13	0,38	101,57	5,20	0,23	100,24	5,04	0,45
Morphological height of face (mm)	men	124,20	9,06	0,44	124,35	6,31	0,32	125,19	6,36	0,63
	women	115,06	5,83	0,27	113,38	5,48	0,25	113,90	5,59	0,50
Nose height (mm)	men	56,96	5,12	0,25	54,94	3,58	0,18	54,31	3,51	0,35
	women	53,16	4,10	0,19	50,28	3,45	0,16	48,81	3,58	0,32
Nose width (mm)	men	34,44	3,50	0,17	34,99	2,88	0,15	34,65	2,70	0,27
	women	31,84	2,87	0,13	31,62	2,55	0,12	31,97	2,52	0,23
Cephalic index (%)	men	81,30	3,80	0,19	85,04	3,90	0,20	77,53	3,44	0,34
	women	82,22	3,50	0,16	85,16	3,87	0,17	78,80	3,48	0,31
Morphological face index (%)	men	87,67	5,21	0,26	88,10	5,01	0,26	93,48	5,72	0,56
	women	85,31	4,80	0,22	85,54	4,92	0,22	88,55	5,05	0,46
Mandible-zygomatic index (%)	men	78,08	4,50	0,22	77,07	4,05	0,21	78,84	4,57	0,45
	women	76,30	3,90	0,18	76,63	3,97	0,18	77,86	4,07	0,37
Transversal-cephalofacial index (%)	men	91,25	3,60	0,18	89,09	3,70	0,19	91,10	3,54	0,35
	women	90,40	3,40	0,16	88,30	3,60	0,16	90,93	3,41	0,31
Height-width nose index (%)	men	60,46	5,90	0,29	63,69	6,98	0,36	64,13	7,08	0,70
	women	59,89	5,40	0,25	62,89	6,58	0,30	65,81	6,99	0,63
Body height (cm)	men	169,09	5,20	0,26	165,47	5,29	0,27	170,83	7,43	0,74
	women	158,13	5,50	0,26	150,72	5,14	0,23	157,91	5,53	0,50

population compared to the data of M. Popov [6] makes a definite impression. In Figs 3 and 4 the results from the comparison of the territorial groups among themselves and with respect to the total Bulgarian population are presented. Summing up the results from the analysis of the statistical parameters of the measurement and scopic features for the population from the three territorial groups certain peculiarities can be differentiated thus defining the corresponding anthropological type.

The anthropological type of the population from the south-west territorial group (Dospat-Trigrad one) displays the following characteristics: height – above the average, brachycephaly, a greater bizygomaticum width compared to the other two territorial groups and the total Bulgarian one but with a smaller medium morphological height (mesoprosopé), with a more pronounced mandibular width comparatively high and medium wide nose, with a straight convex profile. The hairing of the beard and the breasts is over the average. The pigmentation (hair, eyes) is transitory – from darker variants close to the Mediterranean anthropological types to considerable depigmentation (the eyes).

Table 2. Comparative data about the statistical parameters of the West Rhodope population and total Bulgarian population

Features	Sex	West Rhodopes <i>n</i> ♂=900, <i>n</i> ♀=1076			Total Bulgaria, after Popov [6] <i>n</i> ♂=5749, <i>n</i> ♀=2152		
		\bar{x}	<i>s</i>	<i>m</i>	\bar{x}	<i>s</i>	<i>m</i>
Head length (mm)	men	188,88	9,15	0,30	189,02	6,69	0,09
	women	178,90	6,09	0,18	180,29	5,63	0,12
Head breadth (mm)	men	155,68	7,60	0,25	153,78	6,26	0,08
	women	148,74	5,36	0,16	149,90	5,53	0,12
Bizygomatic breadth (mm)	men	140,57	8,93	0,30	139,63	5,76	0,08
	women	133,11	5,21	0,16	132,43	5,66	0,12
Mandibular width (mm)	men	109,28	7,99	0,27	108,62	5,83	0,08
	women	102,00	6,60	0,20	101,91	5,16	0,11
Morphological height of face (mm)	men	124,38	5,19	0,17	126,84	6,54	0,09
	women	114,16	4,88	0,15	118,52	5,96	0,13
Nose height (mm)	men	55,80	4,35	0,14	58,25	3,93	0,05
	women	51,35	3,76	0,11	56,53	3,65	0,08
Nose width (mm)	men	34,70	3,16	0,10	33,72	2,45	0,03
	women	31,75	2,69	0,08	31,34	2,27	0,05
Cephalic index (%)	men	82,46	3,80	0,13	81,30	4,40	0,06
	women	83,17	3,67	0,11	83,23	3,78	0,08
Morphological face index (%)	men	88,52	5,19	0,17	90,81	5,29	0,07
	women	85,78	4,88	0,15	89,53	5,36	0,11
Mandible-zygomatic index (%)	men	77,74	4,32	0,14	77,89	3,95	0,05
	women	76,63	3,95	0,12	77,13	4,06	0,09
Transversal-cephalofacial index (%)	men	90,32	3,64	0,12	91,04	3,66	0,05
	women	89,50	3,49	0,11	88,44	3,78	0,08
Height-width nose index (%)	men	62,25	6,51	0,22	58,23	5,59	0,07
	women	61,94	6,15	0,19	55,75	5,15	0,11
Body height (cm)	men	167,75	5,54	0,18	170,90	6,11	0,08
	women	154,72	5,34	0,16	160,38	5,46	0,12

Table 3. Colour of the skin of the population from the studied groups

Group	Sex	White (1)		Swarthish (2)		Swarthy (3)		Medium score
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Dospat-Trigrad region	men	380	92,01	32	7,75	1	0,24	1,08
	women	440	95,89	19	4,11	—	—	1,03
Smiljan region	men	307	81,43	66	17,51	4	1,06	1,20
	women	455	92,86	33	6,73	3	0,41	1,08
Startsevo	men	87	84,47	16	15,53	—	—	1,16
	women	121	98,37	2	1,63	—	—	1,02

The percent of the bright eyes (with greenish-brown and bright) is greater than the average. For the southern territorial group (the Smiljan one) the more typical morphological features are as follows: medium height, brachycephaly, a cross diameter considerably higher in comparison with the other territorial groups,

Table 4. Colour of the eyes of the population from the studied groups

Group	Sex	Dark (1-4)		Mixed (5-8)		Blue (9-12)		Medium score
		n	%	n	%	n	%	
Dospat-Trigrad region	men	154	37,11	176	42,41	85	20,48	1,83
	women	158	34,35	238	51,74	64	13,91	1,80
Smiljan region	men	94	24,61	229	59,95	59	15,44	1,91
	women	180	36,66	254	51,73	57	11,61	1,75
Startsevo	men	24	23,53	70	68,63	8	7,84	1,84
	women	48	39,02	65	52,84	10	8,14	1,69

Table 5. Colour of the hair of the population from the studied groups

Group	Sex	Blonde (A-O)		Dark (P-Y)		Reddish (I-VI)		Medium score
		n	%	n	%	n	%	
Dospat-Trigrad region	men	24	5,78	388	93,50	3	0,72	1,95
	women	18	3,90	439	95,02	5	1,08	1,97
Smiljan region	men	9	2,36	372	97,38	1	0,26	1,98
	women	21	4,28	464	94,50	1	1,22	1,97
Startsevo	men	1	0,97	101	98,06	1	0,97	2,00
	women	3	2,44	117	95,12	3	2,44	2,00

Table 6. Shape of the hair of the studied groups

Group	Sex	Straight soft (b)		Medium wavy (c)		Big wavy (d)		Small wavy (e)		Medium score
		n	%	n	%	n	%	n	%	
Dospat-Trigrad region	men	280	67,63	103	24,88	30	7,25	1	0,24	2,32
	women	401	86,80	52	11,25	9	1,95	—	—	2,15
Smiljan region	men	282	74,21	56	14,73	37	9,74	5	1,32	1,12
	women	406	82,69	59	12,02	25	5,09	1	0,20	1,22
Startsevo	men	71	68,93	20	19,42	10	9,71	2	1,94	1,45
	women	100	81,30	11	8,94	6	4,88	6	4,88	1,33

Table 7. Shape of the nose of the studied groups

Group	Sex	Concave (1-5)		Straight (6-10)		Convex (11-15)		Medium score
		n	%	n	%	n	%	
Dospat-Trigrad region	men	7	1,69	215	51,93	192	46,38	2,45
	women	43	9,31	297	64,28	122	26,41	2,17
Smiljan region	men	15	3,93	249	65,18	118	30,89	2,27
	women	52	10,59	348	70,88	91	18,53	2,08
Startsevo	men	3	2,91	74	71,85	26	25,24	2,22
	women	16	13,01	88	71,54	19	15,45	2,02

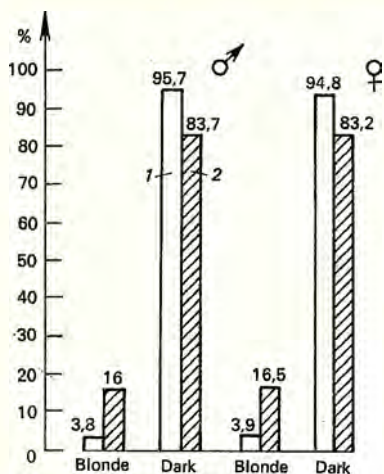


Fig. 1. Comparative data about the hair colour
1 - West Rhodopes; 2 - total Bulgaria, after Popov [6]

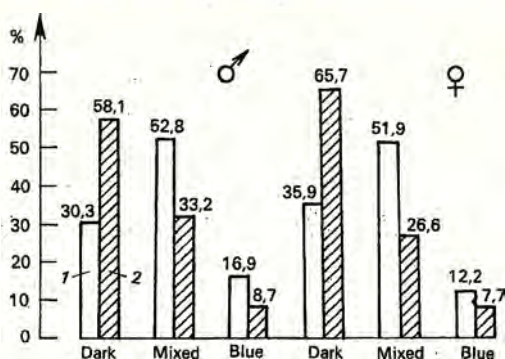


Fig. 2. Comparative data about the eyes colour
1 - West Rhodopes; 2 - total Bulgaria, after Popov [6]

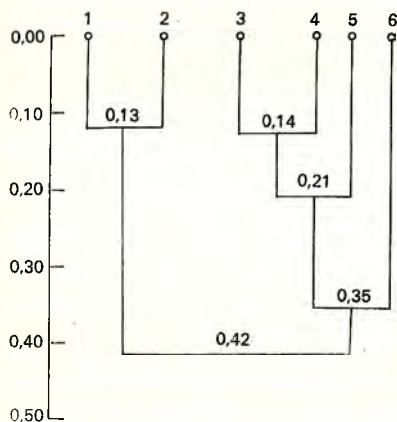


Fig. 3. Morphological distance between the studied territory groups and the total Bulgarian population, after Popov [6]

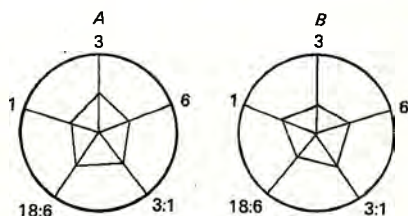


Fig. 4. Polygonic graphs showing the variation of morphological traits between West Rhodopean population (A) and total Bulgarian population (B), after Popov [6]

comparatively well expressed bizygomaticum width and moderately pronounced mandibular width. The face is of medium width and height. The nose dimensions are of medium value, the straight forms of the profile being prevalent. In this group also the mixed hues of the eyes are predominant while the hair are mainly dark-brown. The population from the south-east territorial group has the following anthropological characteristics: tall, but with the smallest value of the cross diameter of the head both with respect to the other two groups and to the total Bulgarian population, mesocephaly. In comparison to the other two territorial groups the face is much more narrow and elongated, hyperlepto-

prosopes. The nose profile is a straight one-compared to the other two groups with the smallest number of convex forms while in women the concave ones are also found. The eyes are predominantly of transitory pigmentation (with greenish-brown eyes) and less dark, the skin is white and the hair-brownblack. The hairing of the breasts and the beard is above the average tending to strong.

From the comparative analysis of the morphological peculiarities of the population from the three territorial groups from the West Rhodopes it is seen that there exists a clearly expressed proximity, but a certain variability as well.

In the population from the two territorial groups – the south-west one (Dospat-Trigrad) and the southern one (Smiljan) two variants can be differentiated among the anthropological types with pronounced brachycephaly. The first one is closer to the Dinaric anthropological type, and the second – to the Alpic or bright brachycephalic “central-european” type [3]. The morphological peculiarities of the anthropological type established among the population of Startsevo village district is related to Pontic anthropological type [9].

According to the investigations of M. Popov [6] all three anthropological types established by us among the population from the West Rhodopes enter the composition of the modern Bulgarian people and are formed on a very old local anthropological Balkan substrate.

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