

## DENTAL ANTHROPOLOGY OF BULGARIAN POPULATION FROM SOME REGIONS OF WESTERN BULGARIA

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**Summary:** It was investigated in anthropological aspect, the contemporary Bulgarian population from the regions of Kustendil, Sapareva banja, Alino and Batanovtsy. It were explored four groups by 100 persons of both sexes, 12-16 aged persons. A big number of basic odontological traits of race-diagnostic and taxonomic meaning were examined. The obtained data were processed and analyzed by Zubov's method (1968).

As a whole, according to the percentage frequency of the odontological traits, the investigate a population can be related to the Western odontological stem. Some of the odontological traits, however, like the shovel-shaped upper medial incisors show an increased frequency, that is an indication of a presence of "eastern" admixture in the ethnogenesis of this population.

**Key words:** Western odontological stem, Eastern odontological stem, shovel-shaped medial incisors, odontology

### Material and method

It were examined 400 individuals, men and women from the regions of Kjustendil, Sapareva banja, Alino and Batanovtsy. It were studied 15 basic odontological traits on pupils, because in them the teeth are still preserved from rubbing out. The investigation of the tooth structure is accomplished visual by means of an odontological mirror and on waxing prints. The processing and analysis of the obtained data are made by the method of Zubov (1968). For comparison of the data and establishing of significant and insignificant differences the percentage frequency is changed into radians.

### Results and discussion

**Diastem.** This trait has not diagnostic and taxonomic meaning. In the Western odontological stem this trait has comparatively high value. In the examined population it varies from 12% to 19%. With the most high value distinguishes the group from Batanovtsy, and with the lowest percentage is the population from Sapareva banja. According to this feature it were not established significant differences.

**Crowding.** This trait is with higher frequency in the Eastern odontological stem. In the studied population from us it was established an increasing frequency, the most

high in Alino (21%). It were not established significant differences by this trait among the groups of the studied population.

**Shovel-shaped upper medial incisors.** This trait is too important because of its high taxonomic and diagnostic value. It distinguishes with high frequency in the populations of Eastern odontological stem. In the examined population the frequency of this trait varies strongly - from 12% to 30%. By this reason it were observed, at comparison of the data of the separate studied groups, significant differences among the groups from Kjustendil and Alino and among the groups from Sapareva banja and Alino.

**Reduction of upper lateral incisors.** This trait distinguishes with comparatively low values. It shows high concentration in the populations from Central Africa, Eastern Sibir, Baltica (Zubov, Haldeeva, 1989). The frequency of this trait in the studied population varies from 3% to 6%. According to this trait, the examined population do not show significant differences.

**Reduction of the hypoconus of second upper molars.** This trait has not taxonomic value and it carries to the reduction system. In the studied population from us this trait distinguishes with high frequency. The frequency of this trait strongly varies in the studied groups - from 64% to 92%.

**Tuberculum Carabelli.** This trait has important taxonomical meaning. In this investigation the trait varies from 36% in Alino to 50% in Batanovtsy. Among these two groups it was established a significant differency by this trait.

**Shape of the lower molars. 6M<sub>1</sub>.** In the studied population from us this trait shows a zero values, with exception of the group from Batanovtsy (1%). By this trait there is no significant differences among the groups.

**4M<sub>1</sub>.** Fourtubercular forms of the first lower molars have a high taxonomical value. In the investigated groups this feature have a comparatively high frequency in the population from Alino – 19%.

It were established significant differences between the groups from Kjustendil and Sapareva banja, Kjustendil and Alino.

**4M<sub>2</sub>.** This trait distinguishes with high frequency in the studied population which carries it to the Western odontological stem. It were not established statistically significant defferences among the studied groups by this trait.

**Distal crest of trigonid.** This trait is with Eastern characterization. It has a high taxonomical and race-diagnostic value. In the studied population this trait meets too rarely. There are no significant differences among the groups by this feature.

**Deflecting wrinkle of metakonid.** This trait distinguishes with too low values in the studied groups and varies from 1% to 3%. It were not established intergroup differences by this trait.

**TAMI.** In the studied groups this trait has too low frequency with exception of the population from Alino where its concentration is comparatively high – 14%. It were not established significant differences among the groups according to this trait.

**Furrow 1 pa (3).** In the investigated population the percentage frequency of this trait varies from 1% to 4%. It were note established significant differences between the groups by this feature.

**Furrow 1 pr(II).** This odontological trait is with too low frequency in the studied groups, and in the groups from Kjustendil and Sapareva banja the trait is with zero values. Among the investigated groups there are not significant differences.

**Furrow 2 med (II).** This is a feature with an increased frequency in the Western odontological stem. This trait distinguishes with high frequency in the studied population and varies from 24% in Sapareva banja to 31% in Batanovtsy.

It were established significant differences among the groups from Kjustendil and Alino, Kjustendil and Batanovtsy, and Sapareva banja and Batanovtsy

## Conclusions

According to the majority of the studied odontological traits, the investigated population relates to the Western odontological stem.

By some features, however, like shovel – shaped medial incisors and crowding, it is observed increasing of the percentage frequency, that is an indication of a presence of “eastern” admixture in the ethnogenesis of the investigated population.

Because of an absence of the significant differences by the majority of the traits, among the studied groups, we can do a conclusion that the examined population is too homogenous.

**Table 1.** Frequency of the basic odontological features in different groups of the Bulgarian population in Central Western Bulgaria.

Regions	Kjustendil			Sapareva banja			Alino			Batanovtsy		
	n	%	rad	n	%	rad	n	%	rad	n	%	rad
features												
Diastem	100	16	0.82	100	12	0.71	100	17	0.85	100	19	0.9
Crowding	100	19	0.9	100	16	0.82	100	21	0.95	100	17	0.85
Showel-shaped	100	30	1.16	100	25	1.04	100	12	0.71	100	19	0.9
Reduction of I2	100	5	0.45	100	3	0.35	100	5	0.45	100	6	0.45
Forme of M2	100	64	1.85	100	71	2	100	87	2.4	100	92	2.57
Carabelle s tubercul	100	41	1.39	100	45	1.47	100	36	1.29	100	50	1.57
6M <sub>1</sub>	100	0	0	100	0	0	100	0	0	100	1	0.2
4M <sub>1</sub>	100	9	0.61	100	3	0.35	100	19	0.9	100	12	0.71
4M <sub>2</sub>	100	88	2.43	100	92	2.57	100	92	2.57	100	94	2.65
Distal crest of trigonid	100	2	0.28	100	1	0.2	100	4	0.4	100	2	0.28
Deflecting wrinkle of metaconid	100	2	0.28	100	1	0.2	100	2	0.28	100	3	0.35
TAMI	100	7	0.53	100	9	0.61	100	14	0.77	100	9	0.61
Furrow 1pa(3)	100	1	0.2	100	4	0.4	100	4	0.4	100	3	0.35
Furrow 1pr(II)	100	0	0	100	0	0	100	4	1.11	100	6	0.45
Furrow 2med(II)	100	29	1	100	24	0.98	100	26	0.68	100	31	0.45

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## DENTALNA ANTROPOLOGIJA POPULACIJE BUGARA IZ NEKIH DELOVA ZAPADNE BUGARSKE

### Izvod

Sa antropološkog aspekta je izučavana savremena bugarska populacija iz regiona Kustendil, Sapareva banja, Alino i Batanovtsy. Istražene su četiri grupe od po 100 ljudi oba pola, starosti 12 – 16 godina. Ispitan je veliki broj odontoloških crta od taksonomskog značaja i značaja utvrđivanja rase. Dobijeni podaci su obrađeni i analizirani po metodu Zubova (1968).

Generalno, prema procentu učestalosti odontoloških crta, istražena populacija može biti zapadnog odontološkog porekla. Međutim, neke od odontoloških crta, kao što su gornji medijalni sekutići oblika lopate, pokazuju povećanu učestalost, što je indikacija prisustva "istočne" primese u etnogenezi ove populacije.

**Ključne reči:** Zapadno odontološko poreklo, Istočno odontološko poreklo, gornji medijalni sekutići oblika lopate, odontologija