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# Anthropological Data about the Buried in a Christian Necropolis (from the Ottoman Period), Situated Near the Town of Dimovo, Vidin District, Northwestern Bulgaria

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The aim of this article is to present the results of detailed anthropological characteristics of bone remains from a Christian necropolis ( $18^{th}$  – the beginning of the  $19^{th}$  Century) situated near the town of Dimovo, Vidin district, Northwestern Bulgaria. Standard anthropological methods of investigation are applied. The age-at-death identification of buried shows that the ratio of subadults to adults is almost equal, but nevertheless the most numerous (35%) is the age group of children under the age of 7 years (*Infans I*), which is a negative demographic trend typical for the European populations during this historical period. Sex reconstruction shows a predominance of females. For both sexes, the mean values for stature fall into the categories "Average" and "Above average".

Key words: paleoanthropology, Christian necropolis, Ottoman period, National Revival period

### Introduction

In 2020 during the construction of a gas pipeline from the Turkish border to the border with Republic of Serbia, a necropolis (archaeological site A10/2) with 83 graves was discovered north of the town of Dimovo, Vidin district (Northwestern Bulgaria). The funeral ritual is inhumation. The burials were carried out according to the Christian canon – the burial pits were oriented west-east, and in several cases there were also reburials. Traces of wooden coffins were revealed. According to the archaeologists the necropolis is dated in the 18<sup>th</sup> c. – until the beginning of the 19<sup>th</sup> c. and belonged to a nowadays non-existent village [19].

This paper includes the results from detailed anthropological characteristics of bone remains discovered during the rescue archaeological excavations of the mentioned necropolis.

# **Material and Methods**

The material in this study includes inhumated human bone remains from 83 graves. The authors identified totally 91 individuals. Standard anthropological methods of investigation are applied [1, 2, 3, 4, 5, 6, 8, 11, 12, 13, 17, 20]. The reconstruction of the stature [7, 9, 10], in the adults was carried out depending on the state of the preserved long limb bones.

## **Results and Discussion**

The distribution of the investigated individuals by age groups is illustrated on **Fig. 1**. The age-at-death identification of buried shows that the ratio between subadults to adults is almost equal (1:1.22), but nevertheless the most numerous (35%) is the age group of children under the age of 7 years (*Infans I*), which is a negative demographic trend typical for the European populations during this historical period, when infant mortality between 0-7 years was 50% [15, 16]. Concerning adult individuals from the necropolis near Dimovo, those who died in *Maturus* (40-60 years) prevail, while only 1 individual falls into an elderly age group *Senilis*.



Fig. 1. Percentage distribution of the investigated individuals by age groups

Sexual reconstruction (**Fig. 2**) showed a significant predominance of females (ratio 1.5:1), which is not typical for the most necropolises in the territory of Europe in the Middle Ages. In adolescence the distribution between two sexes is almost equal, but in the age group *Adultus* (20-40 years) only 1 man was identified and women definitely prevail, which may be due to the fact that the entire necropolis was not excavated, because it did not fall into the servitude of the gas pipeline. Unfortunately, we still do not have data from the Ottoman registers about the settlement and the status of its inhabitants. We hope that in the future we will find the information we need to understand the reason for the lack of young men in the necropolis. In the maturity (40-60 years) the number

of males is higher, which is a specificity characteristic of most necropolises from the Ottoman period [14, 18].



Fig. 2. Age and sex distribution of the investigated individuals

The diagrams (**Figs. 3A, 3B**) show that the majority of the studied males and females fall into the category "tall stature" according to the Trotter-Gleser formulas, while according to the Pearson-Lee formulas the cases in the category "below average stature" predominate in both sexes. The formulas of Trotter and Gleser [9, 10] are the most widely used worldwide for the estimating stature of buried individuals but anthropological investigations about the Ottoman period show that the Pearson-Lee formulas [7] are much more accurate concerning necropolises from nowadays Bulgarian lands [14].



Fig. 3A

Fig. 3B

**Fig. 3.** Distribution of adult individuals by the stature categories (by Martin 1957): **A**–according Trotter-Gleser formulas (1952); **B**–according Pearson-Lee formulas (1935)

#### Conclusions

It should be emphasized that currently there are no other studied necropolises from the National Revival period in Northwestern Bulgaria. For this reason the results from the paleoanthropological investigation of the necropolis near the town of Dimovo are an important database for future studies and have a great importance for Bulgarian anthropology and archeology.

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#### References

- Bass, W. Human osteology: A laboratory and field manual. Special publication no. 2 of the Missouri Archaeological Society. Columbia. Mo, Missouri Archaeological Society2005.
- 2. Brothwell, D. Digging Up Bones. London, British Museum of Natural History, 1965.
- **3. Buikstra, J., D. Ubelaker.** Standards for data collection from human skeletal remains. Fayetteville, AK, Arkansas Archaeological Survey, 1994.
- 4. Ferembach D., I. Schwidetzky, M. Stloukal. Recommendations for age and sex diagnoses of skeletons. J. Hum. Evol., 9, 1980, 517-549.
- **5. Martin, R., K. Saller.** Lehrbuch der anthropologie in sistematischer Darstellung. Stuttgart, Gustav Fischer Verlag, 1957.
- **6. Meindl, R., C. Lovejoy**. Ectocranial suture closure: a revised method for the termination of skeletal age at death based on lateral-anterior sutures. *Am. J. Phys. Anthropol.*, **68**, 1985, 57-66.
- 7. Pearson, K. Mathematical contributions to the theory of evolution. V. On the reconstruction of the stature of prehistoric races. *Phil. Trans. Royal Soc. A*, **193**, 1899, 169-244.
- **8.** Schaefer, M., S. M. Black, L. Scheuer. Juvenile osteology: A laboratory and field manual. San Diego, CA, Academic Press, 2009.
- 9. Trotter, M., G. Gleser. Estimation of stature from long bones of American whites and Negroes. *Am. J. Phys. Anthropol.*, 10, 1952, 469–514.
- Trotter, M., G. Gleser. A re-evaluation of estimation of stature based on measurements of stature taken during life and of long bones after death. – Am. J. Phys. Anthropol., 16, 1958, 79-123.
- 11. White, T. D., P. A. Folkens. The human bone manual. Burlington, Elsevier, 2005.
- 12. Alexeev, V.P., G.F. Debetz. Craniometry. Methods of anthropological research. Moscow, Science, 1964 [in Russian].
- **13.** Alexeev, V.P. Osteometry. Methods of anthropological research. Moscow, Science, 1966 [in Russian].
- Atanassova, N. Comparative characteristics of anthropological indicators of bone remains from the Ottoman period (15<sup>th</sup> – 19<sup>th</sup> Century). *PhD thesis*, Bulgarian Academy of Sciences, Sofia, 2018 [in Bulgarian].
- **15. Georgieva, Ts.** The world of the Bulgarians in the early centuries of the Ottoman rule 15<sup>th</sup>-17<sup>th</sup> Century. Sofia, Mnemosina Publishing House, 1997 [in Bulgarian].
- **16. Georgieva, Ts.** Space and spaces of the Bulgarians 15<sup>th</sup>-17<sup>th</sup> Century. Sofia, LIK Publishing House, 1999 [in Bulgarian].
- **17. Gerasimov, M.** Reconstruction of the face from the skull: (modern and fossil human). Moscow, Publishing house AN USSR, 1955 [in Russian].

- **18**. **Russeva**, **V.** Anthropological data about changes in mortality and life expectancy on the territory of Bulgaria from the Neolithic to the Late Middle Ages. *PhD thesis*, Bulgarian Academy of Sciences, Sofia, 2003 [in Bulgarian].
- **19. Zhivkov, V., S. Todorova.** Rescue excavations of a necropolis dated to the National Revival period, near Dimovo, Vidin district. *Archaeological discoveries and excavations in 2020*, **2**, 2021, 1197-1199 [in Bulgarian, with English summary].
- **19. Zubov, A.** Odontology. Methods of anthropological research. Moscow, Science, 1968 [in Russian].