MORPHOMETRIC DATA FOR SUINES (Sus scrofa domesticus and Sus scrofa ferus) IDENTIFIED IN BRONZE AGE SETTLEMENTS ON ROMANIA’S TERRITORY

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Introduction

The regions of Romania that have yielded Bronze Age fauna for archaeozoological analyses are: Moldavia (12 samples), Transylvania (14 samples), Banat (3 samples), Wallachia (5 samples). Bronze Age in Romania is divided into: Early (3500-2220 BC), Middle (2220-1600/1500 BC) and Late Bronze Age (1600/1500-1100 BC).

The separation between domestic and wild forms is difficult due to their coexistence in samples. Our results reveal biometric data for suines remain and intend to characterize and distinguish interpopulational differences. We used relevant measurements recorded on different anatomical elements which were undergone statistical analysis.

Material and Method

This study is based on suine (Sus scrofa domesticus-pig and Sus scrofa ferus-wild boar) remains recovered in assemblages dating from bronze age from Romania. The measurements were taken with a calliper rule (in millimeters) for following anatomical elements: mandible, maxilla, humerus, scapula, radius, tibia, calcaneum and astragalus Linear measurements were defined according to von den Driesch (1976). The bones with non fused epiphysis and porous surface were excluded from the study. Samples sizes were too small to test males an females separately.

The descriptive analysis were carried out separately for each analyzed variables. We described the variability using coefficient of variation (CV%), which is dimensionless and allows a comparisons of variability of large and small bones. To test the homogeneity of the populations, the Kolmogorov-Smirnov test was used on each variable assuming they had a continuous distribution. The measurements of variables are compared using one-way ANOVA test. For statistical analysis, the software PAST, version 2.08b and Excel were used (Haber et al. 2002; Hammer et al., 2001).

Results and discussion

The archaeological samples include a total of 43991 mammal remains and 9071 of them belong to suines (Table 1). The complete metapodials providing data on withers height are few, therefore the most often the withers height is estimated by means astragalus and calcaneus: we present the variability of the withers height of pigs from Neolithic period using astragalus sin the Figure 2 and Table 1. The observed distribution of data were insignificant different from normality for every variable (p>0.05). The results of one way ANOVA indicated that there were no significant differences between the mean of variables from the samples (p>0.05), excepting the size in the lower third molar in three assemblages: One Way ANOVA: F=6.3; p<0.05; PostHoc test (Q / p): - Mandraica-Bogdanesti: 5.13 / 0.004; - Mandraica - Cernavoda: 6.02 / 0.007; (Figures 3, 4).

The descriptive analysis is presented for every anatomical element in Table 2 and represents an overview of the size in populations investigated.

Conclusions

A crossbreeding between the two forms is suggested by some variables that could not clear reveal the separation limits between the two forms.

Variation limits for the third inferior molar length are 22-40 mm for pig and 41-49 mm for wild boar.

Postcranial skeleton is better represented than cranial remains. The largest metric data series are given by humerus, radius, tibia and calcaneum. Variability limits for calcaneus length are between 80-83.5 mm (pig) and 85-87.5 mm (wild boar).

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References


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