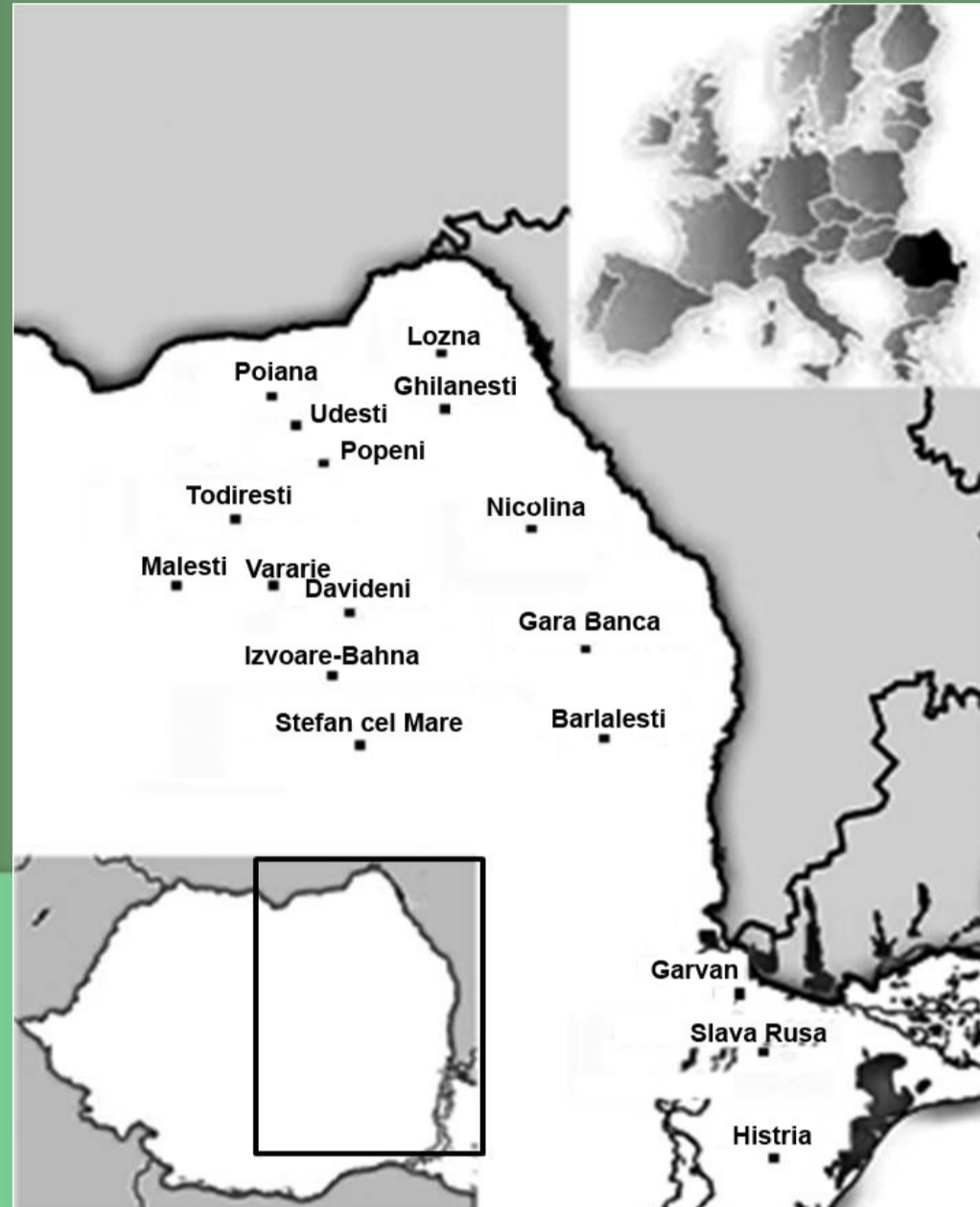
**MORPHOMETRIC ASPECTS IN *SUS SCROFA DOMESTICUS* OF THE IVTH-XTH CENTURIES ON THE EAST AND SOUTH-EAST OF ROMANIA****MARIANA POPOVICI and SIMINA STANC**"Alexandru Ioan Cuza" University Iași, Faculty of Biology, Bd. Carol I 20A, 700505 Iași, Romania,
sorexmin@yahoo.com; siminams@yahoo.com**Introduction**

During archaeological diggings a great number of fauna remains are recovered, providing the information about the human relations and the various species of animals, either domestic or wild. These information permit to estimate different occupations (fishing, hunting, animal breeding), as well as the exploitation strategies of different species within the human communities. On the other hand, animal biologic data are obtained (comparative anatomic analysis of the remains, morphological data of animals, paleopathologic data), ecological data (concerning the spread of some animal species and their various distribution in time) and also information concerning the paleomedium and its possible changes in time. Based on archaeozoological materials can also be determined information concerning the way tools were made, the funeral and religious practices and also the exchanges between communities.

**Material and Methods**

A total 18 archaeological assemblages from Moldavia and Dobrudja have been analysed (Figure 1, Table 1). Given that the material is quite fragmented, we focus on width dimensions. Measurements were taken with a vernier caliper according to von den Driessh (1976) for the following anatomical elements: mandible, maxilla, scapula, pelvis, calcaneum, astragalus, humerus, radius, femur, tibia, metapodials and phalanges.

Some of the metric data come from literature published up (Table 1). The estimation of age is based on both fusion of post-cranial bones epiphyses and degree of erosion of occlusal surface in teeth. Unfused epiphyses and incompletely ossified (i.e. from juvenile animals) were excluded from the study. Teichert index was used for the withers heights of pigs (Teichert, 1990).

Results and Discussion

The archaeozoological samples include a total of 10383 domestic mammal remains and 18.2% of them belong to pigs (Table 1).

High frequencies of pig remains are found in the sites of Vararje (45.45%), Udești (43.81%) and Malești. This could offer us an image on great relative importance of pigs in VIIth-IXth centuries (settlements situated in the Sub-Charpatian territory) opposite the role of cattle from the IIIth-Vth centuries where the lowest frequencies of pigs were observed: Barlaești (7.28%), Nicolina (8.57%), Gara Banca and Ghilanești (in settlements situated in the plain zone) (Table 1, Fig. 2). Few bones of pigs were identified in samples from Dobroudja (Slava Rusa settlement: 15.09% of domestic bone remains). The most of bone remains belong to axial skeleton; in cephalic skeleton only the lower third molar and mandibular symphysis were measured. High degree of fragmentation of the bones and high proportion of the young individuals in the samples are reasons why the number of measurements are relatively low.

Table 1. Quantification of mammal remains from archaeological sites in the period of the IVth-Xth centuries from the eastern and south-eastern Romania.

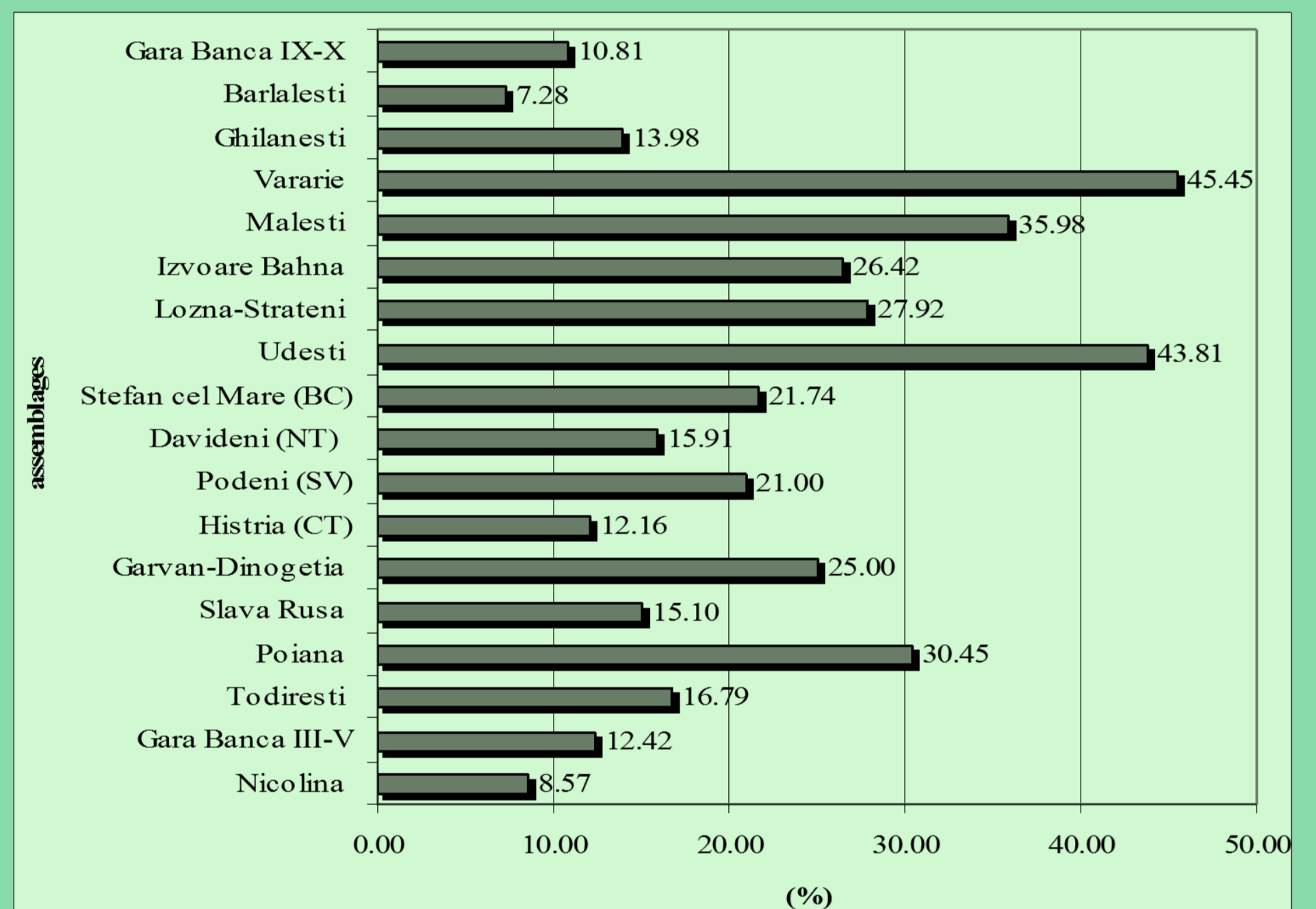
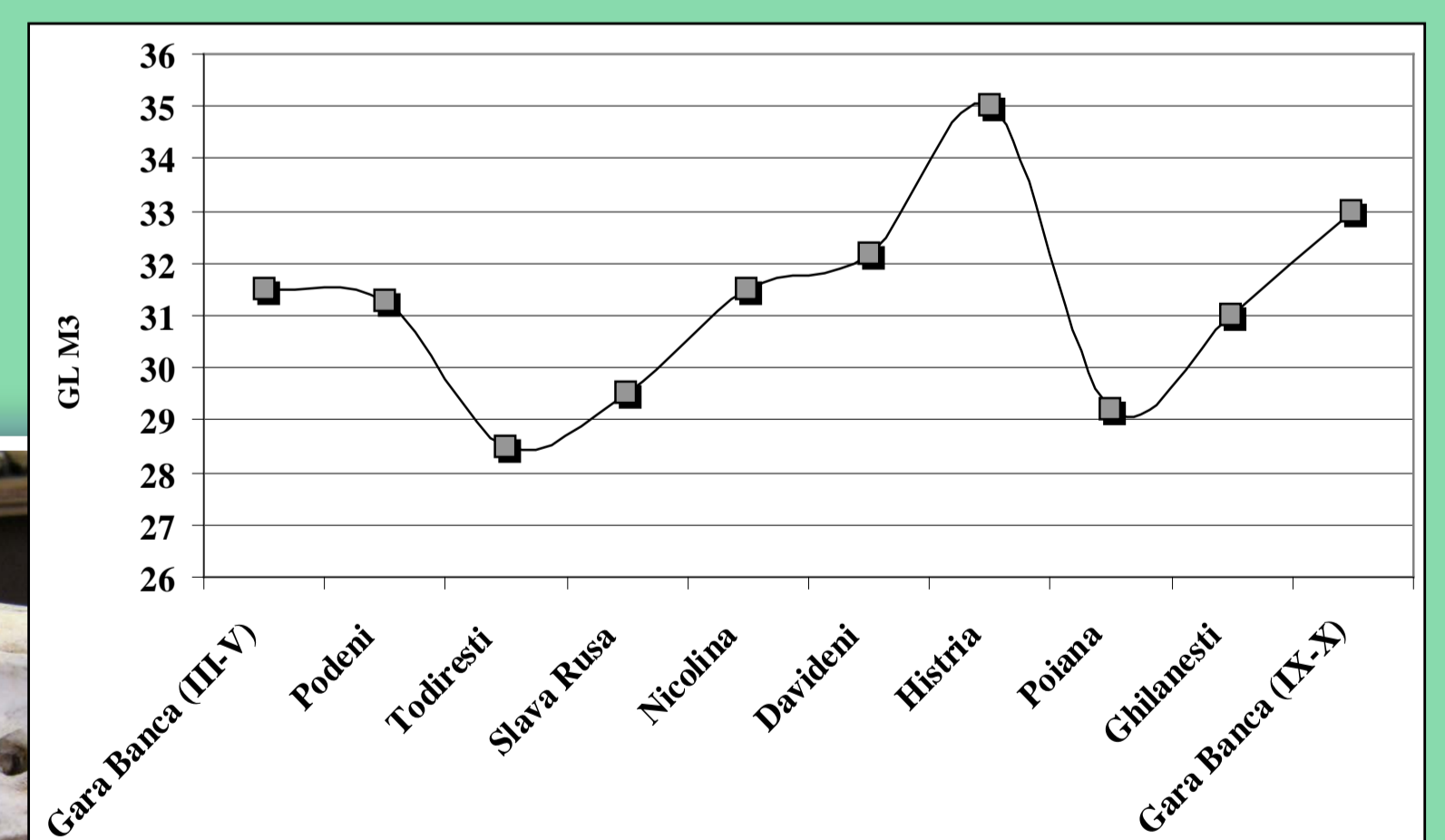
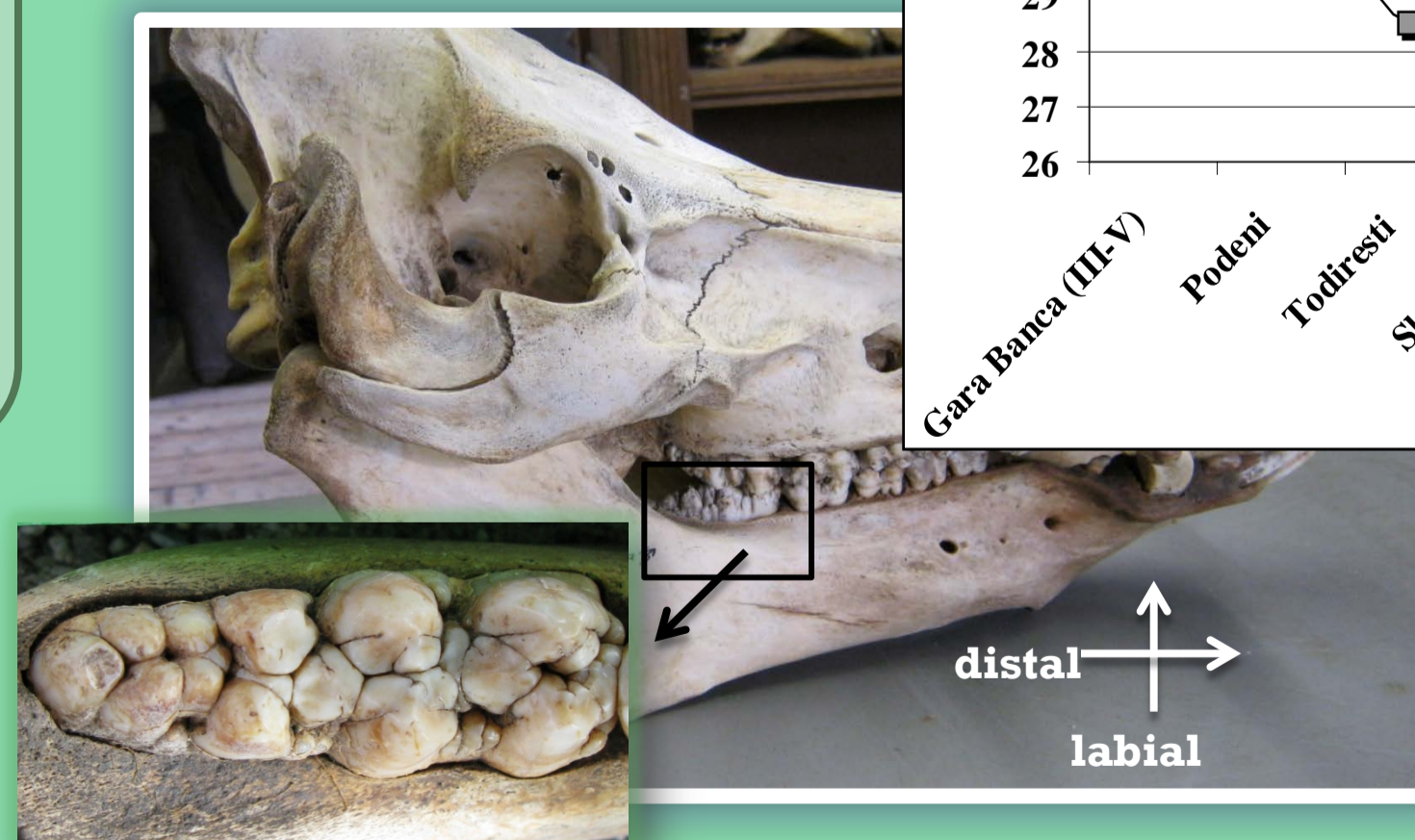
Archaeological sites (County)	References	Historical period	Domestic mammals	<i>Sus scrofa domestica</i>
Gara Banca (Vaslui)	Stanc, 2006	III th -V th centuries	1731	215
Podeni (Suceava)	Haimovici et. al., 1992	III th -V th centuries	1019	214
Todirești (Suceava)	Stanc, 2006; Ungurianu, 2001	IV th -V th centuries	274	46
Slava Rusă (Tulcea)	Stanc, 2006; Stanc&Bejenaru, 2008	IV th -V th centuries	1146	173
Nicolina (Iasi)	Stanc, 2006	IV th -V th centuries	933	80
Garvan - Dinogetia (Tulcea)	Haimovici, 1991	IV th -V th centuries	96	24
Davideni (Neamt)	Haimovici, 1987; Haimovici, 1992	V th -VII th centuries	176	28
Histria (Constanta)	Haimovici, 2007	V th century	518	63
Stefan cel Mare (Bacau)	Haimovici, 1987	V th -VII th centuries	92	20
Izvoare Bahna (Neamt)	Haimovici, 1984	V th -IX th centuries	53	14
Udești (Suceava)	Haimovici & Carpus, 1982	VII th century	703	308
Lozna - Strateni (Botosani)	Haimovici, 1986	VII th -VIII th centuries	659	184
Vararje (Neamt)	Haimovici, 1987	VII th -VIII th centuries	77	35
Malești (Neamt)	Haimovici, 1987	VII th -VIII th centuries	164	59
Poiana (Suceava)	Stanc, 2006	VIII th -IX th centuries	798	243
Ghilanești (Botosani)	Ungurianu, 2000	VIII th -X th centuries	186	26
Barlaești (Vaslui)	Haimovici, 1984	IX th -X th centuries	907	66
Gara Banca (Vaslui)	Haimovici, 1985-1986	IX th -X th centuries	851	92

The wither heights of pigs were **estimated in this study according to small sample size and absence of whole bones**. In sample from Gara Banca the estimation of wither heights was based on two metacarpal IV and one III. By using the Teichert index we obtained the following values of wither height: 67.61 cm, 73.92 cm and 72.7 cm (average 71.41 cm). In Poiana settlement the wither height was assessed on the basis of metacarpal IV, a metatarsus III and two astragalus (average 75 cm). The pig withers heights from Slava Rusa settlement was estimated on two astragalus; the values calculated are 84.6 cm and 77.4 cm. In Udești and Slava Rusa an average of wither height by 80 cm was recorded.

Molars are less affected by sex, age and intra-population variation than other skeletal elements, therefore are probably more suitable for comparing populations from different sites. The lower third molar width has proven useful in this purpose (Davis, 2008). Aspects regarding the variation of pig size in the time could be provided by the distribution of measurements of M3 in some archaeological sites (Fig. 3). The material from Gara Banca (III-V), Podeni, Nicolina, Davideni and Ghilanești reveal individuals similar in size, though the sample size are not significant.

Conclusions

The fluctuations in the role of pigs in the economy of populations living in different areas, is quite relative if we consider the possible effects of quantification biases caused by differences in bones fragmentation, rate of recovery and methodology between different sites. **The variation in size within different pig populations could be interpreted as a feedback to environmental and cultural changes (husbandry practices: selection of specific characteristics of certain animals to fulfill particular purposes)**. The results show that the pigs exploited in settlements from Moldavia and Dobrudja were primitive with the following features: long mandibular symphysis, convex front and an elongated snout, quite similar in shape to that of the wild boar.

**Figure 2. Pig proportions (%NISP; calculated from domestic mammals total) in studied settlements.****Figure 3. Variation of length of the lower third molar in pig (in mm).****References**

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