

**NECROPOLIS OF THE BANU CHURCH (XVI<sup>TH</sup>–XIX<sup>TH</sup> CENTURIES).  
ANTHROPOLOGICAL RESEARCH, COMPARATIVE DATA  
AND ANALOGIES WITH OTHER SYNCHRONOUS SERIES  
FOUND ON THE TERRITORY OF MOLDOVA**

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This report presents comparative anthropological data concerning an osteological series (dated from the XVI<sup>th</sup>–XIX<sup>th</sup> centuries) exhumed in 2011 on the premises of the Banu Church of Iași or found in other Moldavian synchronous necropolises – the osteological series (dated from the XVI<sup>th</sup>–XVIII<sup>th</sup> centuries) discovered in 2007 in the necropolis of “Sfântul Nicolae – Ciurchi” Church – Iași; the osteological series (dated from the XVII<sup>th</sup> century) exhumed in 2008 from the necropolis located in the eastern part of the ancient “Curtea Domnească” of Iași; the necropolis from Siret (XIV<sup>th</sup>–XIX<sup>th</sup> centuries), discovered in 1992; the necropolis from Răchiteni (XVI<sup>th</sup>–XVII<sup>th</sup> centuries), discovered in 1999, and the necropolis from Vânători (XVI<sup>th</sup> century).

The comparative analysis of the dimensional and conformational data revealed that the studied populations are defined by meso-brachyranic, ortho-hypsicanic or tapeino-metricranic skullcaps, average or large occipital bones, meso-uryprosopic or mesene faces with meso-hypsiconceone orbits, meso-leptorrhine nose, orthognathic profiles and over-average or tall stature. Typologically speaking, the populations appear polymorphous and they belong to the large Europoid group (very few skulls present some Mongoloid influences). Depending on the frequency identified within each group, the typological features associated with these populations define the main biological background and the general typological array.

*Key words:* necropolis, XIV<sup>th</sup> – XIX<sup>th</sup> centuries, bio-morphoscopic features, comparative studies.

## 1. INTRODUCTION

The archaeological research conducted in 2011 on the premises of the current Banu Church of Iași pursuant to an edifice rehabilitation project brought to light a necropolis containing 67 human skeletons. According to the data provided by the author of the diggings, Dr. Stela Cheptea, the necropolis was dated from the Late Middle Ages – the beginning of the Modern Age (XVI<sup>th</sup>–XIX<sup>th</sup> centuries), also using as age determination material the coins discovered in some of the tombs.

We mention that reinterment is a distinctive feature of the necropolis as there are two rows of tombs. The anthropological study of the osteological material found in this area (attributed to the parishioners inhabiting the “paupers’ slum”)

adds up to the existing data regarding the overview of the bio-typological features defining the urban population inhabiting the city of Iasi during the previously mentioned period [9].

Since we have anthropometric, morphological and typological data pertaining to several synchronous medieval series discovered both in Iasi and in the neighboring areas (the Central Moldavian Plateau), we will use them as comparative material for the analyzed series. This will allow us to reach some conclusions pertaining to its association with the local population or a foreign group.

The comparative study refers to the osteological series, unearthed in 2007 from the necropolis of “Sfântul Nicolae – Ciurchi” Church – Iași (XVI<sup>th</sup>–XVIII<sup>th</sup> centuries); the osteological series (XVII<sup>th</sup> century) discovered in 2008 in the eastern part of the ancient “Curtea Domneasă” (both necropolises were studied by Mrs. Stela Cheptea, PhD and C.S.I archaeologist and her collaborators at the Centre for European History and Civilization of Iași); the necropolis from Siret (XIV<sup>th</sup>–XIX<sup>th</sup> centuries) discovered in 1992 by the archaeologist Victor Spinei, PhD and his collaborators at the Iasi Institute of Archaeology; the necropolis from Răchiteni (XVI<sup>th</sup>–XVII<sup>th</sup> centuries) discovered in 1999 by the archaeologists V. Ursachi and D. Hordila at the History Museum of Roman; and the necropolis from Vânători (XVI<sup>th</sup> century) discovered by the archaeologist Mircea Tecu at the History Museum of Tecuci.

## 2. MATERIALS AND METHOD

This article presents a comparative anthropological analysis of the osteological series discovered on the premises of the “Banu” Church of Iași in relation to other synchronous osteological series (previously mentioned) found in the same area. As we stated above, the analyzed series found on the premises of the Banu Church of Iași consists of 67 skeletons (some of them found in numbered tombs – a total of 18 tombs, mostly individual, but most of them came from reinterment tombs) whereof 26.87% belong to children, 4.48% belong to teenagers and 68.66% belong to adults, mature and senile people [9].

On the premises of the “Sfântul Nicolae – Ciurchi” of Iași we found 680 skeletons, whereof 17.94% belong to children (0–14 years), 8.38% belong to teenagers and the highest percentage belongs to adults, mature and senile people (73.67%) [21].

The osteological series exhumed from the necropolis located in the eastern part of the ancient “Curtea Domneasă” includes 111 human skeletons, whereof 13.51% belong to teenagers and 86.49% belong to adults, mature and senile people. We remark upon the absence of any child skeleton (0–14 years – *infans I*, *infans II*) [8].

The series discovered in the necropolis from Siret contains 50 skeletons, most of them found in a bad state of preservation. The archaeologists managed to put together only 16 braincases and six facial skeletons [6]. The series from Răchiteni

includes 181 skeletons, whereof 35.36% belong to children (0–14 years), 0.55% belongs to teenagers and 64.09% belong to adults, mature and senile people [14]. The small series from Vânători is represented by 53 skeletons. More than half of the skeletons (53%) belong to children, 10% belong to teenagers and 37.73% belong to adults, mature and senile people [15].

The age at death and the gender (for the segment 20-x years) were determined using the methods recommended by Brothwell, Bruzek, Mays, Schmitt, Walrath and collaborators, White and Folkens [4, 5, 13, 20, 23, 24]. In the case of subadults, the age at death was determined based on the eruption of the temporary and permanent teeth, according to the methodology proposed by Moores and collaborators, Schaefer and collaborators [16, 18]. We also based our assumptions on the long bones epiphyses ossification level and their repartition in the associated age categories (Maresh, Scheuer and Black) [11, 19].

The anthropometric and conformity study of each skeleton was conducted according to the classical methods recommended by Martin [12] and for the evaluation of stature we used the dimorphic scales provided by the authors Alexeev and Debetz [1]. The somatoscopic and typological features were defined according to the methods and scales provided by Eickstedt [7]. The stature was established according to the dimensional scales suggested by Bach, Breitingner, Manouvrier, Trotter and Glessner [2, 3, 10, 22]. The absolute and the relative values resulting from the direct measurements and from the calculation of the conformity indices were matched to the scales suggested by Olivier [17].

The variability of the cephalofacial features and of the statures defining the analyzed series is presented in Tables 1, 3 and 4, whereas the distribution on categories of the main cephalofacial and stature indices is presented in Tables 2, 5 and 6.

*Table 1*  
Cephalofacial and stature variability in the male and female series from Iași

Martin No.	Necropolis Authors Character	Banu Church – Iași (XVI <sup>th</sup> -XIX <sup>th</sup> centuries)				“Sfântul Nicolae – Ciurchi” Church (Iași) (XVI <sup>th</sup> -XVIII <sup>th</sup> centuries)				“Curtea Domnească” – Iași (XVII <sup>th</sup> century)			
		Groza and collaborators [9]				Simalcsik and collaborators [21]				Groza [8]			
		Male		Female		Male		Female		Male		Female	
		N	M	N	M	N	M	N	M	N	M	N	M
1	G-op	4	167.75	2	177.50	32	182.22	30	172.07	60	179.85	16	176.13
8	Eu-eu	5	140.40	2	136.75	46	140.55	39	136.87	61	145.42	18	143.44
9	Ft-ft	9	97.72	2	93.00	38	98.91	43	97.78	61	98.54	17	98.71
10	Co-co	6	119.92	2	111.75	40	118.50	38	117.34	58	122.61	17	120.18
12	Ast-ast	5	112.60	-	-	40	109.28	34	108.96	63	110.98	17	108.53
17	Ba-b	2	129.75	-	-	7	127.79	8	128.94	57	137.32	14	134.04
20	Po-b	4	111.00	-	-	20	116.60	20	112.43	61	117.48	17	114.44
45	Zy-zy	3	135.33	1	115.00	7	126.07	13	117.92	55	133.97	15	130.87
48	N-pr	12	67.38	3	64.33	11	66.32	20	65.43	56	69.29	13	66.42
47	N-gn	8	109.61	1	96.00	7	116.29	9	110.61	54	118.97	13	114.19
51	Mf-ek	13	39.27	4	38.63	15	40.17	19	39.18	55	40.71	13	39.77
52	Height of the orbit	9	35.50	4	33.63	15	32.77	19	33.29	55	32.76	13	33.08

Table 1 (continued)

54	Al-al	10	23.15	3	23.33	18	24.58	19	23.37	57	24.55	16	23.63
55	N-ns	11	49.09	2	46.75	12	52.25	18	48.58	57	52.27	13	50.08
62	Ol-st	4	42.00	2	46.75	10	39.90	18	38.20	56	44.88	16	42.47
63	Enm2-enm2	5	37.70	1	34.50	14	39.00	10	38.20	50	40.20	14	38.50
65	Kdl.-kdl.	7	115.79	3	133.83	24	123.85	24	112.79	61	12.50	15	117.50
66	Go-go	11	99.14	3	95.33	41	104.76	33	94.06	65	104.76	18	101.75
68	Depth of the mandible	11	69.45	3	68.63	39	69.08	33	66.14	66	70.21	18	68.64
69(1)	Height at the g.m. level	19	30.13	6	25.42	63	32.41	70	28.55	67	32.69	18	31.36
69(3)	Thickness at the g.m. level	19	11.39	6	10.50	65	11.75	71	10.96	67	12.11	18	11.39
70	Height vertical ram	15	59.23	5	58.40	36	64.93	38	60.91	67	67.02	17	67.97
71	Width vertical ram	15	30.40	5	28.50	37	31.36	43	28.93	69	33.38	18	33.26
8/1	Cranial index	3	84.83	2	77.16	30	77.63	29	80.59	60	80.93	16	81.48
17/1	Basio-bregmatic long. index	2	79.44	-	-	7	71.01	7	79.51	55	76.49	14	76.10
17/8	Basio-bregmatic transv. index	2	93.18	-	-	6	89.74	8	82.61	56	94.41	14	93.71
20/1	Porio-bregmatic long. index	2	66.88	-	-	18	64.29	18	66.53	58	65.47	16	64.99
20/8	Porio-bregmatic transv. index	2	78.92	-	-	19	80.53	20	82.14	59	80.91	17	79.98
9/10	Frontal-transversal index	5	80.49	1	91.35	32	83.67	34	82.44	58	80.20	17	82.12
9/8	Frontal- parietal index	4	68.09	-	-	27	70.00	31	69.30	59	67.62	17	68.72
12/8	Parietal-occipital index	3	79.28	-	-	35	77.49	30	76.30	60	76.31	17	75.87
40/5	Gnathic index	2	80.96	-	-	3	91.53	2	92.23	52	94.06	13	93.12
47/45	Total facial index	3	80.71	-	-	4	93.26	8	91.02	53	89.34	13	88.29
48/45	Facial superior index	2	49.84	1	51.00	5	54.70	13	55.44	54	52.06	13	51.31
52/51	Orbitary index	8	90.42	4	87.65	14	82.25	19	85.21	55	80.58	13	83.07
54/55	Nazal index	9	42.07	2	51.86	12	47.17	16	45.49	57	47.20	13	47.30
63/62	Palatal index	4	90.11	1	98.55	10	98.48	9	89.09	49	90.99	13	94.74
45/8	Cranial-facial transv. index	3	95.00	-	-	7	87.08	10	86.15	55	92.08	15	91.20
9/45	Fronto jugal index	3	70.39	1	79.13	7	76.16	12	80.94	54	73.46	15	75.41
66/45	Jugo mandibular index	3	73.44	-	-	4	80.54	8	75.92	52	78.68	14	77.19
69(3)/69(1)	Mandible robustness index	19	38.45	6	42.15	64	36.40	68	39.03	67	37.18	18	36.55
	<b>Stature</b>	27	166.19	17	157.17	142	167.39	173	157.44	76	169.04	25	165.44

Table 2

Distribution on categories of the main cephalofacial indices and stature data in the male and female series exhumed from the Banu Church necropolis (Iași), compared to the data gathered from the necropolis of “Sf. Nicolae – Ciurchi” Church and the necropolis located in the eastern part of “Curtea Domnească” (Iași)

Indices	Necropolis	Banu Church – Iași (XVI <sup>th</sup> –XIX <sup>th</sup> centuries)				“Sfântul Nicolae – Ciurchi” Church (Iași) (XVI <sup>th</sup> –XVIII <sup>th</sup> centuries)				“Curtea Domnească” – Iași (XVII <sup>th</sup> century)			
		Authors				Simalcsik and collaborators [21]				Groza [8]			
		Male		Female		Male		Female		Male		Female	
Category	N	%	N	%	N	%	N	%	N	%	N	%	
8/1	Ultradolichocrane (x-64.9)	-	-	-	-	1	3.33	-	-	-	-	-	-
	Hiperdolichocrane (65.0-69.9)	-	-	-	-	2	6.67	2	6.90	-	-	-	-
	Dolichocrane (70.0-74.9)	-	-	1	50.00	12	40.00	4	13.79	6	10.00	1	6.25
	Mesocrane (75.0-79.9)	1	33.33	-	-	4	13.33	7	24.14	16	26.67	3	18.75
	Brachycrane (80.0-84.9)	1	33.33	1	50.00	6	20.00	9	31.03	31	51.67	11	68.75
	Hyperbrachycrane (85-89.9)	-	-	-	-	2	6.67	5	17.24	7	11.67	1	6.25
Ultrabrachycrane (90-x)	1	33.33	-	-	3	10.00	2	6.90	-	-	-	-	

Table 2 (continued)

20/1	Chamecrane (x-57.9)	-	-	-	-	1	5.56	-	-	-	-	-	-	-
	Orthocrane (58.0-62.9)	1	33.33	-	-	5	27.78	3	16.67	11	18.97	5	31.25	
	Hypsicrane (63.0-x)	2	66.67	-	-	12	66.67	15	83.33	47	81.03	11	68.75	
20/8	Tapeinocrane (x-79.9)	3	75.00	-	-	7	36.84	8	40.00	20	33.90	8	47.06	
	Metriocrane (80.0-85.9)	1	25.00	-	-	10	52.63	9	45.00	38	64.41	9	52.94	
	Acrocrane (86.0-x)	-	-	-	-	2	10.53	3	15.00	1	1.69	-	-	
9/8	Stenometope (x-65.9)	1	20.00	-	-	2	7.41	5	16.13	14	23.73	4	23.53	
	Metriometope (66.0-68.9)	2	40.00	-	-	10	37.04	8	25.81	29	49.15	5	29.41	
	Eurymetope (69.0-x)	2	40.00	1	100.00	15	55.56	18	58.06	16	27.12	8	47.06	
12/8	Occipital narrow (x-71.9)	-	-	-	-	3	8.57	3	10.00	1	1.67	3	17.65	
	Occipital middle (72.0-78.9)	2	50.00	-	-	22	62.86	14	46.67	49	81.67	11	64.71	
	Occipital broad (79.0-85.9)	2	50.00	-	-	10	28.57	10	33.33	10	16.67	3	17.65	
	Occipital very broad (86.0-x)	-	-	-	-	-	-	3	10.00	-	-	-	-	
47/45	Hypereuryprosope (x-80.9)	1	33.33	-	-	-	-	-	-	4	7.55	-	-	
	Euryprosope (81-84.9)	1	33.33	-	-	-	-	-	-	8	15.09	4	30.77	
	Mesoprosope (85-89.9)	-	-	-	-	-	-	2	28.57	19	35.85	6	46.15	
	Leptoprosope (90-94.9)	1	33.33	-	-	3	75.00	4	57.14	11	20.75	1	7.67	
	Hyperleptoprosope (95-x)	-	-	-	-	1	25.00	1	14.29	11	20.75	2	15.38	
48/45	Hypereuryene (x-44.9)	1	33.33	-	-	-	-	-	-	2	3.70	-	-	
	Euryene (45.0-49.9)	-	-	-	-	-	-	-	-	16	29.63	5	38.46	
	Mesene (50.0-54.9)	1	33.33	1	100.00	3	60.00	6	46.15	22	40.74	7	53.85	
	Leptene (55.0-59.9)	1	33.33	-	-	1	20.00	6	46.15	13	24.07	1	7.69	
	Hyperleptene (60.0-x)	-	-	-	-	1	20.00	1	7.69	1	1.85	-	-	
52/51	Chameconch (x-75.9)	-	-	-	-	3	21.43	2	10.53	17	30.91	1	7.69	
	Mesconch (76.0-84.9)	2	22.22	2	50.00	7	50.00	3	15.79	25	45.45	8	61.54	
	Hypsiconch (85.0-x)	7	77.78	2	50.00	4	28.57	14	73.68	13	23.64	4	30.77	
54/55	Leptorhine (x-46.9)	5	55.56	-	-	8	66.67	6	37.50	26	45.61	5	38.46	
	Mesorhine (47.0-50.9)	1	11.11	-	-	-	-	7	43.75	21	36.84	6	46.15	
	Chamaerrhine (51.0-57.9)	3	33.33	1	100.00	3	25.00	2	12.50	9	15.79	2	15.38	
	Hyperchamaerrhine (58.0-x)	-	-	-	-	1	8.33	1	6.25	1	1.75	-	-	
Stature		<b>Male</b>	<b>Female</b>											
	Very short	x-149.9	x-139.9	-	-	-	-	-	-	-	-	-	-	-
	Short	150-159.9	140-148.9	3	10.71	2	11.76	4	2.82	2	1.16	-	-	-
	Under middle	160-163.9	149-152.9	10	35.71	1	5.88	23	16.20	26	15.03	6	7.89	-
	Middle	164-166.9	153-155.9	2	7.14	4	23.53	42	29.58	46	26.59	16	21.05	-
	Over middle	167-169.9	156-158.9	5	17.86	1	5.88	34	23.94	37	21.39	27	35.53	1
	High	170-179.9	159-167.9	8	28.57	9	52.94	39	27.46	57	32.95	26	34.21	17
	Very high	180-x	168-x	-	-	-	-	-	-	5	2.89	1	1.32	7

Table 3

Cephalofacial variability and stature in the male series exhumed from the Banu Church necropolis (Iași) compared to the data gathered from the necropolises of Siret, Răchiteni and Vânători

Martin No.	Necropolis	Banu Church – Iași (XVI <sup>th</sup> – XIX <sup>th</sup> centuries)		Siret (XIV <sup>th</sup> –XIX <sup>th</sup> centuries)		Răchiteni (XVI <sup>th</sup> –XVII <sup>th</sup> centuries)		Vânători (XVI <sup>th</sup> century)	
		Groza and collaborators [9]		Cantemir and Botezatu [6]		Miu and collaborators [14]		Miu and Botezatu [15]	
		N	M	N	M	N	M	N	M
1	G-op	4	167.75	9	178.55	25	180.45	11	180.70
8	Eu-eu	5	140.40	11	145.72	28	149.17	11	138.80
9	Ft-ft	9	97.72	8	99.62	32	102.48	10	98.50
10	Co-co	6	119.92	10	126.00	28	128.2	10	117.70

Table 3 (continued)

12	Ast-ast	5	112.60	9	110.88	-	-	11	109.10
17	Ba-b	2	129.75	3	133.66	17	140.81	10	131.90
20	Po-b	4	111.00	9	114.55	25	119.89	10	111.80
45	Zy-zy	3	135.33	3	133.33	13	133.98	10	128.80
48	N-pr	12	67.38	3	67.33	15	70.65	10	68.60
47	N-gn	8	109.61	3	111.66	-	-	-	-
51	Mf-ek	13	39.27	3	43.00	14	41.59	10	41.00
52	Height of the orbit	9	35.50	3	32.00	14	34.52	10	32.80
54	Al-al	10	23.15	3	25.66	19	25.03	10	23.60
55	N-ns	11	49.09	3	48.00	15	54.99	10	50.40
<b>INDICES</b>									
8/1	Cranial index	3	84.83	9	82.52	25	82.13	11	76.90
17/1	Basio-bregmatic long. index	2	79.44	3	74.40	17	77.74	10	73.00
17/8	Basio-bregmatic transv. index	2	93.18	7	91.90	17	94.45	10	95.60
20/1	Porio-bregmatic long. index	2	66.88	7	64.67	22	66.18	10	62.50
20/8	Porio-bregmatic transv. index	2	78.92	8	78.89	24	80.16	10	80.80
9/10	Frontal-transversal index	5	80.49	8	79.48	25	79.73	9	83.90
9/8	Frontal- parietal index	4	68.09	7	68.73	25	69.01	10	71.10
12/8	Parietal-occipital index	3	79.28	9	75.78	27	77.67	11	79.70
40/5	Gnathic index	2	80.96	-	-	-	-	-	-
47/45	Total facial index	3	80.71	3	83.90	-	-	-	-
48/45	Facial superior index	2	49.84	3	50.62	12	52.04	10	53.20
52/51	Orbitary index	8	90.42	3	74.41	14	83.03	10	79.70
54/55	Nazal index	9	42.07	3	53.93	16	46.59	10	46.40
45/8	Cranial-facial transv. index	3	95.00	3	91.53	12	88.95	-	-
<b>Stature</b>		27	166.19	20	167.90	42	168.00	13	165.92

Table 4

Cephalofacial variability and stature in the female series exhumed from the Banu Church necropolis (Iași) compared to the data gathered from the necropolises of Siret, Rachiteni and Vânători

Martin No.	Necropolis Authors	Banu Church – Iași (XVI <sup>th</sup> –XIX <sup>th</sup> centuries) Groza and collaborators [9]		Siret (XIV <sup>th</sup> – XIX <sup>th</sup> centuries) Cantemir and Botezatu [6]		Răchiteni (XVI <sup>th</sup> – XVII <sup>th</sup> centuries) Miu and collaborators [14]		Vânători (XVI <sup>th</sup> century) Miu and Botezatu [15]		
		Character	N	M	N	M	N	M	N	M
		1	G-op	2	177.50	7	174.14	32	172.26	7
8	Eu-eu	2	136.75	7	144.14	36	142.90	7	136.30	
9	Ft-ft	2	93.00	6	100.33	41	99.08	7	92.40	
10	Co-co	2	111.75	7	122.14	41	124.88	7	113.80	
12	Ast-ast	-	-	6	113.50	-	-	7	103.40	
17	Ba-b	-	-	2	124.50	14	133.52	7	124.00	
20	Po-b	-	-	5	109.60	24	113.91	7	106.60	
45	Zy-zy	1	115.00	6	122.00	21	127.78	6	118.70	
48	N-pr	3	64.33	5	65.40	22	65.40	5	62.20	
47	N-gn	1	96.00	3	103.33	-	-	-	-	
51	Mf-ek	4	38.63	5	39.00	23	39.85	6	38.60	
52	Hight of the orbit	4	33.63	5	33.20	24	32.58	6	31.20	
54	Al-al	3	23.33	4	23.75	25	24.89	5	21.80	
55	N-ns	2	46.75	4	48.25	22	50.91	5	46.40	
<b>INDICES</b>										
8/1	Cranial index	2	77.16	7	82.83	32	82.83	7	81.30	
17/1	Basio-bregmatic long. index	-	-	2	71.34	14	75.38	7	74.00	
17/8	Basio-bregmatic transv. index	-	-	2	88.31	15	91.85	7	91.30	
20/1	Porio-bregmatic long. index	-	-	5	63.15	24	66.25	7	63.50	
20/8	Porio-bregmatic transv. index	-	-	5	76.00	24	80.66	7	77.90	
9/10	Frontal-transversal index	1	91.35	6	82.00	38	80.97	7	81.60	
9/8	Frontal- parietal index	-	-	5	68.67	36	69.61	7	67.70	

Table 4 (continued)

12/8	Parietal-occipital index	-	-	6	78.28	29	74.38	7	67.70
40/5	Gnathic index	-	-	-	-	-	-	-	-
47/45	Total facial index	-	-	2	89.47	-	-	-	-
48/45	Facial superior index	1	51.00	3	56.21	16	51.95	5	52.00
52/51	Orbitary index	4	87.65	5	85.35	21	81.65	6	80.40
54/55	Nazal index	2	51.86	4	49.20	19	48.18	5	47.80
45/8	Cranial-facial transv. index	-	-	-	-	-	-	-	-
<b>Statura medie</b>		17	157.17	9	159.77	45	159.42	7	155.03

Table 5

Distribution on categories of the main cephalofacial indices and stature data for the male series exhumed from the Banu Church necropolis (Iași) compared to the data gathered from the necropolises of Siret, Răchiteni and Vânători

Indici	Necropolis Authors	Banu Church – Iași (XVI <sup>th</sup> -XIX <sup>th</sup> centuries)		Siret (XIV <sup>th</sup> - XIX <sup>th</sup> centuries)		Răchiteni (XVI <sup>th</sup> - XVII <sup>th</sup> centuries)		Vânători (XVI <sup>th</sup> century)	
		Groza and collaborators [9]		Cantemir and Botezatu [6]		Miu and collaborators [14]		Miu and Botezatu [15]	
	Categoria	N	%	N	%	N	%	N	%
8/1	Ultradolichoerane (x-64.9)	-	-	-	-	-	-	-	-
	Hiperdolichoerane (65.0-69.9)	-	-	-	-	-	-	-	-
	Dolichoerane (70.0-74.9)	-	-	-	-	2	8.00	3	27.27
	Mesocrane (75.0-79.9)	1	33.33	4	44.44	6	24.00	6	54.54
	Brachycrane (80.0-84.9)	1	33.33	2	22.22	10	40.00	2	18.18
	Hyperbrachycrane (85-89.9)	-	-	2	22.22	5	20.00	-	-
20/1	Ultrabrachycrane (90-x)	1	33.33	1	11.11	2	8.00	-	-
20/8	Chameocrane (x-57.9)	-	-	-	-	1	4.54	-	-
	Orthocrane (58.0-62.9)	1	33.33	1	14.28	-	-	8	80.00
	Hypsocrane (63.0-x)	2	66.67	6	85.71	21	95.45	2	20.00
9/8	Tapeinocrane (x-79.9)	3	75.00	5	62.50	11	45.83	4	40.00
	Metriocrane (80.0-85.9)	1	25.00	3	37.50	12	50.00	5	50.00
	Acrocrane (86.0-x)	-	-	-	-	1	4.17	1	10.00
12/8	Stenometope (x-65.9)	1	20.00	2	28.57	8	32.00	2	20.00
	Metriometope (66.0-68.9)	2	40.00	1	14.28	3	12.00	1	10.00
	Eurymetope (69.0-x)	2	40.00	4	57.14	14	56.00	7	70.00
47/45	Occipital narrow (x-71.9)	-	-	2	22.22	4	14.81	1	9.09
	Occipital middle (72.0-78.9)	2	50.00	5	55.55	12	44.44	4	36.36
	Occipital broad (79.0-85.9)	2	50.00	2	22.22	10	37.04	5	45.45
	Occipital very broad (86.0-x)	-	-	-	-	1	3.70	1	9.09
48/45	Hypereuryprosope (x-80.9)	1	33.33	1	33.33	-	-	-	-
	Euryprosope (81-84.9)	1	33.33	1	33.33	-	-	-	-
	Mesoprosope (85-89.9)	-	-	1	33.33	-	-	-	-
	Leptoprosope (90-94.9)	1	33.33	-	-	-	-	-	-
	Hyperleptoprosope (95-x)	-	-	-	-	-	-	-	-
52/51	Hypereuryene (x-44.9)	1	33.33	-	-	-	-	-	-
	Euryene (45.0-49.9)	-	-	2	66.66	3	25.00	-	-
	Mesene (50.0-54.9)	1	33.33	1	33.33	7	58.33	8	80.00
	Leptene (55.0-59.9)	1	33.33	-	-	2	16.67	1	10.00
	Hyperleptene (60.0-x)	-	-	-	-	-	-	1	10.00
52/51	Chameconch (x-75.9)	-	-	1	33.33	1	7.14	2	20.00
	Mesoconch (76.0-84.9)	2	22.22	2	66.66	6	42.86	6	60.00
	Hypsiconch (85.0-x)	7	77.78	-	-	7	50.00	2	20.00

Table 5 (continued)

54/55	Leptorrhine (x-46.9)	5	55.56	1	33.33	10	62.50	4	40.00
	Mesorrhine (47.0-50.9)	1	11.11	-	-	1	6.25	5	50.00
	Chamaerhine (51.0-57.9)	3	33.33	1	33.33	5	31.25	1	10.00
	Hyperchamaerhine (58.0-x)	-	-	1	33.33	-	-	-	-
Statura	Very short (x-149.9)	-	-	-	-	-	-	-	-
	Short (150-159.9)	3	10.71	1	5.00	1	2.38	-	-
	Under middle (160.163.9)	10	35.71	3	15.00	6	14.28	3	23.07
	Middle (164-166.9)	2	7.14	5	25.00	11	26.19	5	38.46
	Over middle (167-169.9)	5	17.86	7	35.00	10	23.80	4	30.76
	High (170-179.9)	8	28.57	4	20.00	14	33.33	1	7.69
Very high (180-x)	-	-	-	-	-	-	-	-	

Table 6

Distribution on categories of the main cephalofacial indices and stature data for the female series exhumed from the Banu Church necropolis (Iași) compared to the data gathered from the necropolises of Siret, Răchiteni and Vânători

Indici	Necropolis	Banu Church – Iași (XVI <sup>th</sup> -XIX <sup>th</sup> centuries)		Siret (XIV <sup>th</sup> -XIX <sup>th</sup> centuries)		Răchiteni (XVI <sup>th</sup> -XVII <sup>th</sup> centuries)		Vânători (XVI <sup>th</sup> century)	
		Authors		Cantemir and Botezatu [6]		Miu and collaborators [14]		Miu and Botezatu [15]	
	Category	N	%	N	%	N	%	N	%
8/1	Ultradolichocrane (x-64.9)	-	-	-	-	-	-	-	-
	Hiperdolichocrane (65.0-69.9)	-	-	-	-	-	-	-	-
	Dolichocrane (70.0-74.9)	1	50.00	-	-	1	3.22	-	-
	Mesocrane (75.0-79.9)	-	-	1	14.28	7	22.58	2	28.57
	Brachycrane (80.0-84.9)	1	50.00	5	71.42	11	34.37	5	71.42
	Hyperbrachycrane (85-89.9)	-	-	1	14.28	9	29.03	-	-
Ultrabrachycrane (90-x)	-	-	-	-	3	9.68	-	-	
20/1	Chameocrane (x-57.9)	-	-	-	-	-	-	-	-
	Orthocrane (58.0-62.9)	-	-	2	40.00	3	12.50	4	57.14
	Hypsocrane (63.0-x)	-	-	3	60.00	21	87.50	3	42.85
20/8	Tapeinocrane (x-79.9)	-	-	5	100.00	10	41.67	7	100.00
	Metriocrane (80.0-85.9)	-	-	-	-	10	41.67	-	-
	Acrocrane (86.0-x)	-	-	-	-	4	16.66	-	-
9/8	Stenometope (x-65.9)	-	-	-	-	7	19.44	3	42.85
	Metriometope (66.0-68.9)	-	-	3	60.00	11	30.55	1	14.28
	Eurymetope (69.0-x)	1	100.00	2	40.00	18	50.00	3	42.85
12/8	Occipital narrow (x-71.9)	-	-	-	-	10	34.48	-	-
	Occipital middle (72.0-78.9)	-	-	3	50.00	18	62.07	6	85.71
	Occipital broad (79.0-85.9)	-	-	3	50.00	1	3.45	1	14.28
	Occipital very broad (86.0-x)	-	-	-	-	-	-	-	-
47/45	Hypereuryprosope (x-80.9)	-	-	-	-	-	-	-	-
	Euryprosope (81-84.9)	-	-	-	-	-	-	-	-
	Mesoprosope (85-89.9)	-	-	2	66.66	-	-	-	-
	Leptoprosope (90-94.9)	-	-	1	33.33	-	-	-	-
	Hyperleptoprosope (95-x)	-	-	-	-	-	-	-	-
48/45	Hypereuryene (x-44.9)	-	-	-	-	2	12.50	-	-
	Euryene (45.0-49.9)	-	-	-	-	2	12.50	1	20.00
	Mesene (50.0-54.9)	1	100.00	2	66.66	6	37.50	4	80.00
	Leptene (55.0-59.9)	-	-	1	33.33	6	37.50	-	-
	Hyperleptene (60.0-x)	-	-	-	-	-	-	-	-
52/51	Chameconch (x-75.9)	-	-	-	-	3	14.28	1	14.28
	Mesoconch (76.0-84.9)	2	50.00	3	60.00	12	57.14	3	42.85
	Hypsiconch (85.0-x)	2	50.00	2	40.00	6	28.57	2	28.57



Table 6 (continued)

54/55	Leptorrhine (x-46.9)	-	-	1	25.00	9	47.37	2	40.00
	Mesorrhine (47.0-50.9)	-	-	1	25.00	5	26.31	2	40.00
	Chamaerrhine (51.0-57.9)	1	100.00	2	50.00	4	21.05	1	20.00
	Hyperchamaerrhine (58.0-x)	-	-	-	-	1	5.26	-	-
Statura	Very short (x-139.9)	-	-	-	-	-	-	-	-
	Short (140-148.9)	2	11.76	-	-	-	-	4	57.14
	Under middle (149-152.9)	1	5.88	-	-	3	6.52	-	-
	Middle (153-155.9)	4	23.53	2	22.22	4	8.69	-	-
	Over middle (156-158.9)	1	5.88	2	22.22	18	39.13	1	14.28
	High (159-167.9)	9	52.94	5	55.55	17	36.95	2	28.57
Very high (168-x)	-	-	-	-	4	8.69	-	-	

### 3. RESULTS AND DISCUSSIONS

#### *Neurocranium – comparative analysis*

The skullcap is averagely long for most of the male series, excepting the series unearthed from the necropolis of the Banu Church, where the skull appears to be short (167,75 cm – in calculating this mean, we took into account four skulls). In the other series, the average values indicate middle sized skulls, with a rather limited variability – between 178.55 mm in Siret and 182.20 mm in “Sfântul Nicolae – Ciurchi” Church. We remark that in the necropolis located nearby the ancient ”Curtea Domnească”, the skullcap average length (179.85 mm) recorded very similar values to those identified in the series from Siret (178.80 mm), Răchiteni (180.40 mm) and Vânători (180.70 mm).

In the female series, we observe a higher variability of the average values, ranging between the short category and the lower limit of the long category, more precisely between the minimum value of 167.40 mm in Vânători and the maximum value of 176.13 mm in “Curtea Domnească”. Same as the male series, the female series from “Sfântul Nicolae – Ciurchi” Church, Răchiteni and Siret have averagely long skullcaps (172.07 mm; 172.20 mm; 174.14 mm).

As concerns the width, the skullcaps are either averagely wide, same as in the series from “Sfântul Nicolae – Ciurchi” Church and the Banu Church, where the average values are virtually equal for the two genders (140.50 mm and 140.40 mm in males; 136.80 mm and 136.70 mm in females) or incipiently wide, as is the case with the series from ”Curtea Domnească” and the series from Siret, where the average values are also very similar for the two genders (145.40 mm and 145.70 mm in males; 143.40 mm and 144.10 mm in females). A tendency towards higher widths is observed in the series from Răchiteni, where the average values come close to the upper limit of the wide category (149.10 mm in the male group and 142.90 mm in the female group).

The series from Vânători appears to have a narrower skullcap. This is mainly indicated by the male mean; on a dimorphic scale, it falls under the upper limit of the small category (138.80 mm); the female mean (136.30 mm) indicates an averagely wide skullcap. The positioning of the mean values on the categories of

the dimorphic scale reveals a tendency towards wider skulls in females compared to males. As regards the conformity, in most series, the skull is averagely brachycephalic, with values ranging between 80.93 u.i. (in the eastern part of “Curtea Domnească”) and 84.83 u.i. (in the Banu Church) in the male groups and between 80.60 u.i. (“Sfântul Nicolae – Ciurchi” Church) and 82.80 u.i. (Siret and Răchiteni) in the female groups.

The series exhumed from the necropolis of “Sfântul Nicolae – Ciurchi” Church and the series found in the necropolis from Vânători appear with slightly lower means (mesocranic) in males (77.60 u.i.; 76.90 u.i.) and at the lower limit of brachycranic in females (80.50 u.i.). The series from Siret and Răchiteni are defined, in both genders, by higher brachycranic means; the values are virtually equal (82.50 u.i. and 82.10 u.i. in males and 82.80 u.i. in females).

As regards the individual variability of the cranial indices pertaining to the above-mentioned series, it ranges between hyperdolichocranic (only in the series from “Sfântul Nicolae – Ciurchi” Church) and ultrabrachycranic (“Sfântul Nicolae – Ciurchi” Church, Banu Church, Siret and Răchiteni); however, in most of the male and female groups, the brachycranic values are significant. The incidence of the brachycranic category is generally higher in the female series (ranging between ca. 56% in “Sfântul Nicolae – Ciurchi” Church and ca. 86% in Siret) as opposed to the male series (ranging between ca. 37% in “Sfântul Nicolae – Ciurchi” Church and ca. 68% in Răchiteni).

In most series, the narrow or very narrow skulls – hyperdolichocranic and ultradolichocranic – are absent (the only exception we encounter is in the series from “Sfântul Nicolae – Ciurchi”: three male skulls and two female skulls); on the other hand, the wide or extremely wide skulls – hyperbrachycranic and ultrabrachycranic – are rarely observed (five skulls “Sfântul Nicolae – Ciurchi” Church and Răchiteni, two skulls in Siret, one skull in the Banu necropolis).

Setting aside the extreme values, which are rarely encountered, we remark upon a limited variability of the cranial indices, ranging between dolichocranic and hyperbrachycranic. Mesocephalic skulls are well represented in some of the male groups, such as those from “Sfântul Nicolae – Ciurchi” (ca. 50%), Siret (ca. 44%) and Vânători (ca. 54%); in the remaining groups, the incidence of mesocranic doesn't exceed one third of the cases. As regards skull height, defined by the two vertical dimensions, basio-bregmatic and porio-bregmatic, we recorded the highest values in the series from “Curtea Domnească” and Răchiteni, both in the male group (137.20 mm and 140.90 mm in ba-b; 117.40 mm and 119.90 mm in po-br) and in the female group (134.00 mm and 133.50 mm; 114.40 mm and 113.90 mm).

In the remaining series, the skull is either averagely high – as in Siret (ba-b: 133.60 mm; po-b: 114.50 mm in males; ba-b: 124.50 mm and po-b: 109.60 mm in females) or averagely low in the male series discovered in the Banu Church necropolis (ba-b: 129.60 mm; po-b: 111.0 mm) and in both the female and the male series from Vânători (ba-b: 131.90 mm; po-b: 111.80 mm in males; ba-b: 124.0 mm; po-b: 106.60 mm in females).

Summarizing the previously mentioned data, we observe a greater diversity for these indices. The means range between the lower limit of the low category and the upper limit of the high category. The ratios between the skull height and length, expressed through the longitudinal porio-bregmatic indices, have significantly high values, indicating hypsicranic skulls. This reflects a limited variability of the individual values, since in all the series subjected to study we only encountered two of the three potential categories of indices: hypsicranic (mainly) and orthocranic.

The highest incidence of the hypsicranic skulls was observed in Răchiteni (95.45% in males; 87.50% in females) and the lowest incidence was found in the Banu Church series, where the most common feature is orthocephaly (80% in males; 57% in females), whereas hypsicranic is rarely encountered (20%, and ca. 43%, respectively). The ratio between the skull height and width, expressed through the transversal porio-bregmatic index, indicates the prevalence of tapeino-metricranic skulls. The average values are situated either at the upper limit of the tapeinocephalic category or at the lower limit of the metricranic category.

In the male groups, the average indices are virtually equal within their respective categories: incipiently metricranic – in “Curtea Domnească” (80.10 u.i.), “Sfântul Nicolae – Ciurchi” (80.50 u.i.), Răchiteni and Vânători (80.10 u.i.), or pronouncedly tapeinocranic – in Siret (78.80 u.i.) and Banu Church (78.90 u.i.). The female means have lower values and a higher variability compared to the male means. The tapeinocephalic average values range between 76.0 u.i. (in Siret) and 79.80 u.i. (in “Curtea Domnească”), whereas the metricranic indices range from 80.60 u.i. (in Răchiteni) to 82.10 u.i. (in “Sfântul Nicolae – Ciurchi” Church).

Thus, the series discovered in the eastern part of “Curtea Domnească” and the one unearthed from “Sfântul Nicolae – Ciurchi” Church are mainly defined by metricranic skullcaps, both in the male groups (64.40% and 52.60%) and in the female groups (52.90% and 45.40%, respectively). This particular feature is also specific of the male groups from Vânători and Răchiteni (50.0%). The series from Siret stands out from the other series by lower skullcaps; we encounter here a significant rate of tapeinocranic indices (62.50% in males and 100% in females). The same feature defines the women from Vânători; in this case, skullcaps are exclusively tapeinocranic.

As regards the forehead width (ft-ft) in the series subjected to study, we generally observe a tendency towards wider foreheads in the male skulls as opposed to the female skulls. In the male groups, the average forehead width is either at the upper limit of the middle category (in the series unearthed from the eastern part of “Curtea Domnească” and Vânători: 98.50 mm in both cases; Banu Church – 97.70 mm, “Sfântul Nicolae – Ciurchi” Church – 98.90 mm) or in the high category (the lower limit in Siret – 99.60 mm or the upper limit in Răchiteni – 102.40 mm).

In the female group, the minimum forehead width alternates between the upper limit of the wide category (in “Curtea Domnească” – 98.70 mm, “Sfântul Nicolae – Ciurchi” Church – 97.80 mm, Răchiteni – 99.08 mm and Siret – 100.30 mm)

and the middle category (in Vânători – 92.40 mm and Banu Church – 93.30 mm). From the analyzed data, we observe a slightly more limited variability of the average values in the male groups as opposed to the female groups, ranging between 97.70 mm and 102.40 mm in the former, respectively between 92.40 mm and 100.30 mm in the latter.

We remark upon the fact that the average values calculated for the Banu Church series are very similar to those recorded for other urban series unearthed in Iasi city area (the necropolis of “Sfântul Nicolae – Ciurchi” Church and the necropolis found in the eastern part of the ancient “Curtea Domnească”), as well as the values recorded for the osteological series from Siret. The series from Răchiteni stands out from the rest, as it has the highest mean values for this parameter (forehead width).

In relation to the skull width, the forehead appears (as indicated by the fronto-parietal indices) predominantly metriometope and in rare cases, eurymetope; variability ranges between 68.09 u.i. (in Banu Church) and 71.10 u.i. (in Vânători) for males, respectively between 67.70 u.i. (in Vanatori) and 69.60 u.i. (in Rachiteni) for females. The Banu Church series (68.0 u.i. – an average value obtained considering only four skulls) resembles the series from Siret (68.70 u.i. – in males), as well as the series discovered in the eastern part of “Curtea Domnească” (67.70 u.i. – in males).

The individual indices have a wide variability, ranging from stenometope values (narrow foreheads) to eurymetope values (wide foreheads); in most series, the highest incidence of the individual indices is encountered in the eurymetope category (wide foreheads) for both genders. In some cases, the incidence alternates between the two categories – eurymetope or metriometope. Thus, in the series from “Sfântul Nicolae – Ciurchi” Church, Răchiteni and Vânători, the skulls are mainly defined by eurymetope foreheads, both in the male groups (with an incidence ranging between 56% and 70%) and in the female groups (with an incidence ranging between 42.80% and 58%); in the Banu Church necropolis eurymetope and metriometope foreheads are equally represented (40%).

As a rule, metriometope foreheads have lower incidences – between 10% (in Vanatori) and 37% (in “Sfântul Nicolae – Ciurchi” Church) for the male groups and between 14.20% (in Vânători) and 30.50% (in Răchiteni) for the female groups; the only exception is the female series found in Siret, where metriometope foreheads are predominant (60%). Narrow, stenometope foreheads seem more frequent in the male groups compared to the female groups; the associated values range between 7% (in “Sfântul Nicolae – Ciurchi” Church) and ca. 23% (in the series unearthed from the eastern part of “Curtea Domnească”). The women from Vanatori are an exception in this regard, as in their case stenometope and eurymetope shapes have equal prevalence (42.80%).

As regards the occipital width, statistical values (means and frequencies) are generally higher in the female groups as opposed to the male groups, indicating a slightly more pronounced tendency towards wider occipitals in the former. The male means, with similar values ranging between 109.10 mm (in Vânători) and

110.98 mm (in the series unearthed from the eastern part of “Curtea Domnească”) can be described as average, excepting the male series from Banu Church, where the average value is slightly higher (112.60 mm).

The female means can mainly be described as high; they are situated either at the lower limit of high (in the series unearthed from the eastern part of “Curtea Domnească” and in “Sfântul Nicolae – Ciurchi” Church, where the values are practically equal: 108.50 mm and 108.90 mm) or at the upper limit of high (converging very high) – in Siret (113.50 mm); the women from Vânători once again stand out from the other series, with medium sized occipitals (103.40 mm on average).

In relation to the skullcap width, the occipital appears averagely wide, presenting a rather limited variability (the average values range between 75.70 u.i. in Siret and 79.70 u.i. in Vânători for the male groups, respectively between 74.30 u.i. in Răchiteni and 78.20 u.i. in Siret for the female groups). The women from Vânători have the lowest mean of the occipito-parietal indices (67.70 u.i – small). The individual variability of the occipito-parietal indices appears wider, ranging from the narrow to the very wide categories (with very low frequencies). The highest incidence is recorded in most of the series, in the middle category (for both genders). In the Banu Church series, the occipitals are in equal measure medium sized or wide (50%). The series discovered in the eastern part of “Curtea Domnească” stands out from the rest, as it has the highest incidence of medium indices (81.67% in males and 64.70% in females). The other series have a lower incidence, ranging between ca. 36% and ca. 63% in the male groups, respectively between ca. 50% and ca. 62% in the female groups. Narrow occipitals are seldom encountered (the incidence ranges between ca. 2% and 14%). However, this shape is better represented in the series from Răchiteni (ca. 22% in males and ca. 34% in females).

#### ***The facial skeleton – comparative analysis***

We have no statistical data about the total face height (n-gn) for the series from Răchiteni and Vânători. In these cases, the archaeologists only conducted a dimensional and conformity analysis on the upper section of the facial skeleton.

In the series discovered in the eastern part of the ancient “Curtea Domnească” and the series from “Sfântul Nicolae – Ciurchi” Church, the facial skeleton is averagely high in both the male groups (118.90 mm, respectively 116.30 mm) and the female groups (114.10 mm – bordering on high, respectively 110.61 mm); the urban series from the Banu Church (Iasi) and Siret (Suceava) have an averagely short face – the recorded values are 109.60 mm and 111.60 mm in males, respectively 96 mm and 103.30 mm in females. The upper facial height (n-pr) generally follows the same distribution as the total height. The means are slightly lower in the male groups; they either fall under the short category (in the urban series from “Sfântul Nicolae – Ciurchi” Church and Banu Church: 66.30 mm and 67.30 mm and the rural series from Vânători: 68.80 mm and Siret: 67.30 mm) or under the lower limit of the middle category (in the series exhumed from the eastern part of the ancient “Curtea Domnească”: 69.20 mm and Răchiteni: 70.60 mm).

In the female groups, the upper face appears medium sized, with very similar average values: between 64.33 mm (in Banu Church) and 66.42 mm (in the series exhumed from the eastern part of the ancient "Curtea Domnească"). The mean is slightly lower in Vânători (same as in the male case) and it falls under the short category (62.20 mm).

The maximum facial width (known as the bizygomatic diameter) is, in most series, averagely middle sized, with values ranging between 133.30 mm (in Siret) and 135.30 mm (in the Banu Church series) for the male groups and between 122 mm (in Siret) and 130.80 mm (in the series exhumed from the eastern part of the ancient "Curtea Domnească") for the female groups. The series from Vânători stands out through lower means; in this case, the highest incidence pertains to the narrow faces (128.80 mm in males and 118.17 mm in females). We remark upon the fact that the male means associated with the series from the eastern part of the ancient "Curtea Domnească", as well as the series from Răchiteni and Siret fall under the middle sized category, with almost equal values (133.97 mm; 133.98 mm; 133.30 mm).

The facial indices resulting from the ratio between the total height and the maximum facial width indicate that the series subjected to study range between the upper limit of the hypereuryprosopic category (short faces) and the upper limit of the leptoprosopic category (long faces). We encounter short faces in the series from Siret, where the female mean is slightly higher compared to the male mean (85.50 u.i. as opposed to 83.90 u.i.) and in the male skulls exhumed from the premises of the Banu Church (the mean of the three skulls – 80.70 u.i. is situated at the limit between the hypereuryprosopic and the euryprosopic category).

As concerns the series from the eastern part of "Curtea Domnească", the faces are averagely mesoprosopie (tending towards leptoprosopic in the male group – 89.34 u.i. as opposed to 88.29 u.i. – in the female group), whereas in "Sfântul Nicolae – Ciurchi" Church, the means have higher values, indicating leptoprosopic faces (93.20 u.i. in the male group and 94 u.i. in the female group). The individual variability of the total facial indices is rather wide, ranging between the hyper-euryprosopic and hyperleptoprosopic categories. The maximum rates alternate between different series or within the same series, between the two genders.

In the Banu Church series (Iași), considering the three male skulls for which we calculated facial indices, two of them have short faces – euryprosopic, whereas the third has a long face. In the series exhumed from the eastern part of "Curtea Domnească" (with a large variability of individual values), mesoprosopie faces are encountered in approximately 36% of the males and approximately 46% of the females, whereas long faces – leptoprosopic and hyperleptoprosopic are better represented in the former (ca. 41% as opposed to ca. 23%); on the other hand, in the female group, the euryprosopic category is observed in approximately one third of the cases (ca. 31% as opposed to ca. 23%).

In the series from “Sfântul Nicolae – Ciurchi” Church, facial indices appear predominantly with high (leptoprosopic) values, followed by a lower incidence of the medium or low values. The six skulls from Siret (three males and three females) are distributed differently in the categories of the dimorphic scale; three of them are mesoprosopie (two females and one male), two male skulls have euryprosopic faces and the remaining female skull falls under the leptoprosopic category.

In most of the series subjected to study, the upper facial skeleton is medium sized. The average values, as well as the individual values, have a lower variability than in the case of the total facial indices. The average values of the upper facial indices point to mesene faces in all the series; they range between a minimum value of 50.60 u.i. (in Siret) and a maximum value of 57.40 u.i. (in “Sfântul Nicolae – Ciurchi” Church) for the male groups, respectively between 51 u.i. (one skull from Banu) and 55.40 u.i. (in “Sfântul Nicolae – Ciurchi” Church) for the female groups.

The individual distribution of the upper facial indices generally presents a higher variability between the extreme categories. However, the mesene values have the highest incidence followed either by the leptene or euryene shapes. The series from Vanatori stands out from the other series through the higher incidence of mesene faces, which are equally represented in the two genders (80%).

The urban series of “Sfântul Nicolae – Ciurchi” Church and the rural series of Răchiteni appear predominantly mesene, with higher frequencies in the male groups (60% and 58.30%, respectively) as opposed to the female groups, where the mesene and leptene shapes have equal incidences (46.10% in the former and 37.50% in the latter). The three male skulls from Banu Church have different upper facial indices: mesene (33.33%), leptene (33.33%) and hypereuryene (33.33%). In the urban series from Siret (consisting of six skulls), three of the skulls (two females and a male) have mesene faces, two male skulls have euryene faces and the last skull (female) has a leptene face.

In the series exhumed from the eastern part of “Curtea Domnească”, apart from the significant incidence of the mesene faces (40.70% in the male group and 53.80% in the female group), we also observed a substantial number of short faces – euryene and hypereuryene (a combined incidence of ca. 33% in males and ca. 38% in females). Euryene and hypereuryene faces were also encountered in the series from Răchiteni (25% in males and 23% in females). The lowest incidence was recorded for long faces – leptene and hyperleptene, which are mainly present in males (ca. 26% as opposed to ca. 8%); we have already mentioned these shapes in the conformity analysis of the upper facial skeleton.

As regards the features of the orbits – both dimensional and conformational, we observe a certain degree of homogeneity of the means in the series subjected to study. The mean orbit width ranges between the upper limit of the narrow category (Banu Church – 39.20 mm, “Sfântul Nicolae – Ciurchi” Church – 40.10 mm and the series exhumed from the eastern part of “Curtea Domnească” – 40.70 mm) and the lower limit of the middle category (Vânători – 41.00 mm and Răchiteni –

41.60 mm). In the urban series from the eastern part of the ancient “Curtea Domnească” and the series from “Sfântul Nicolae – Ciurchi” Church the means calculated by gender are virtually equal; they fall under the upper limit of the narrow category in males (40.70 mm and 40.10 mm) and the lower limit of the medium category in females (39.77 mm and 39.10 mm, respectively).

In the rural series from Răchiteni and Vânători, the male means are slightly higher through the incipiently average values (41.60 mm and 41 mm), whereas the female means are slightly different (average in the former – 39.80 mm and low in the latter – 38.60 mm). The male group from Siret stands out from the rest; in this case, the orbit width has a higher mean, situated at the lower limit of the high category (43 mm).

The mean orbit height ranges between the low category (with almost equal values in the series subjected to study – 32.70 mm, in “Sfântul Nicolae – Ciurchi” Church – 32.70 mm, in Vânători – 32.80 mm and in Siret – 32 mm) and the lower limit of the high category (in Banu Church – 35.50 mm) for the male groups, respectively between the low category (in Răchiteni – 32.50 mm and Vanatori – 31.20 mm) and the lower limit of the medium category (33.08 mm in the series exhumed from the eastern part of the ancient “Curtea Domnească”; 33.20 mm in “Sfântul Nicolae – Ciurchi” Church and Siret; 33.60 mm in Banu Church) for the female groups.

In most of the analyzed series, the orbital indices can be described as mesoconch. However, we recorded higher, hypsiconch means in the series from the Banu Church (90.40 u.i in males and 85.30 u.i. in females) and in the male group from Siret, where the orbits appear averagely low – cameconch (with a tendency towards mesoconch – 74.40 u.i.). As for the other series, the variability of the mean values within the mesoconch category is relatively limited, ranging between 79.70 u.i. (in Vânători) and 83.03 u.i. (in Răchiteni) for the male groups, respectively between 80.40 u.i. (in Vânători) and 83.07 u.i. (in the series subjected to study) for the female groups.

As regards the incidence of the orbital indices in the categories of the dimorphic scales, the series from Vânători (60% in males and 42.80% in females), “Curtea Domnească” (45.40% and 61.50%), Răchiteni (52.80% and 57.14%) and Siret (66.60% and 60%) and the males exhumed from “Sfântul Nicolae – Ciurchi” Church (50%) are mainly mesoconch; in the Banu Church series, the orbits are predominantly hypsiconch in males (77.70%), respectively mesoconch or hypsiconch in females (with equal incidence – 50% each). A substantial number of high-hypsiconch orbits is encountered in the female skulls from “Sfântul Nicolae – Ciurchi” Church (ca. 74%) and the male skulls from Răchiteni (50%); in the remaining series, the incidence of the hypsiconch orbits doesn't exceed one third of the cases (ranging between ca. 24% and ca. 30%).

Low, cameconch orbits are less frequently encountered in the analyzed series. The only exceptions in this regard refer to the male groups from “Curtea



Domnească”, “Sfântul Nicolae – Ciurchi” Church and Vânători, as they are statistically more representative (the incidence of the cameconch orbits ranges between ca. 24% and ca. 31%).

In most of the male series, nasal indices indicate mesorrhine or leptorrhine noses, since the mean values are situated at the limit between the leptorrhine (narrow) and the mesorrhine (wide) categories, ranging between 46.50 u.i. (in Răchiteni and Vânători) and 47.20 u.i. (the series exhumed from the eastern part of the ancient “Curtea Domnească” and “Sfântul Nicolae – Ciurchi” Church). In the female series, nasal indices are most frequently mesorrhine, ranging between 47.30 u.i. (the series exhumed from the eastern part of “Curtea Domnească”) and 49.20 (Siret). A higher, camerrhine mean was recorded in the male group from Siret (59.93 u.i.).

The nasal indices distribution on categories indicates a more pronounced tendency towards leptorrhine shapes (narrow noses) in the male groups; the mean value ranges between a minimum value of 45.60% in the series exhumed from the eastern part of “Curtea Domnească” and a maximum value of 66.60% in “Sfântul Nicolae – Ciurchi” Church. In the female groups, we observe a tendency either towards mesorrhine shapes (in the series exhumed from the eastern part of “Curtea Domnească” – 46.10% and “Sfântul Nicolae – Ciurchi” Church – 43.70%) or leptorrhine shapes (Răchiteni – 47.30%). In the series from Vânători, leptorrhine and mesorrhine shapes have equal incidences. Camerrhine nasal indices have a very low incidence (less than 20%) in most of the representative series; the incidences recorded in the small series (with a small number of skeletons) are less relevant, since they can be considered rare occurrences.

As regards the facial profile, established only for the series dated from the Medieval Age, it is exclusively orthognathic both in the male groups (the series exhumed from the eastern part of “Curtea Domnească” – 94.06 u.i.; “Sfântul Nicolae – Ciurchi” Church – 91.53 u.i.) and in the female groups (93.12 u.i. and 92.23 u.i., respectively); the two male skulls from Banu Church are also orthognathic, however with a tendency towards mesognathic (80.96 u.i.).

In relation to the stature, most of the male groups of skeletons are defined by an over-average height, with values ranging between 166.20 cm (in Banu Church) and 169.04 cm (in the series exhumed from the eastern part of “Curtea Domnească”). The female means have a wider interval of variance, ranging between the above-average height and the upper limit of the tall stature. In “Sfântul Nicolae – Ciurchi” Church, as well as in Banu Church, the mean values are over-average and almost equal (157.40 cm and 157.20 cm), whereas in Siret and Răchiteni they are at the lower limit of the tall category (once again, the values for the two series are very similar: 159.70 cm and 159.40 cm). We remark upon the fact that in the series exhumed from the eastern part of “Curtea Domnească” we recorded the highest mean values for the stature (169.04 cm and 165.40 cm – above-average), whereas in Vânători we encounter the lowest mean values (165.90 cm and 155.03 cm – average height). There is a wide individual variability of the statures, ranging between the short category and the very tall category. In most series, the highest

incidence was recorded for the above-average and tall statures – between ca. 51% (“Sfântul Nicolae – Ciurchi” Church) and 71% (the series unearthed from the eastern part of “Curtea Domnească”) in the male groups, respectively between ca. 54% (“Sfântul Nicolae – Ciurchi”) and ca. 78% (Siret) in the female groups.

The second place is occupied by the average and above-average statures, with a cumulated incidence ranging between ca. 29% (in the series exhumed from the eastern part of “Curtea Domnească”) and ca. 46% (in “Sfântul Nicolae – Ciurchi”) for the male series, respectively between ca. 15% (in Răchiteni) and ca. 42% (in “Sfântul Nicolae – Ciurchi”) for the female series. The short and very short statures are less frequently encountered, with an incidence ranging between ca. 1% (in the series exhumed from the eastern part of “Curtea Domnească”) and ca. 12% (in Banu). We identified no case of short or very short stature in the series from “Sfântul Nicolae – Ciurchi” Church or among the female skeletons from Siret or Răchiteni. In the series from Vânători, the stature is most frequently average in males (ca. 61%) and short in females (57%).

Summarizing the data gathered through metric analysis, we have to begin by pointing out that the series discovered on the premises of Banu Church follows the anthropological patterns of the reference series, exhibiting several common features and a small number of differences that were also observed in relation to the series subjected to analysis. However, these differences are less numerous than those observed within the series itself. The mean values of the skull parameters calculated for the osteological series subjected to analysis define the anthropological features of the populations inhabiting northern Moldova (mainly the Central Moldavian Plateau, which also includes the city of Iasi) during the Late Middle Ages.

The analysis of the metric and conformational features revealed that both the urban and rural populations who lived during the Middle Ages were mainly meso-brachycranial, predominantly hypsicranial, tapeino-metricranial, metrico-urymetope, with average occipital bones, meso-uryprosopic and mesene, with meso-hypsiconch orbits, a meso-leptorrhine nose (seldom camerrhine), orthognathic facial profile and above-average or tall stature. Apart from these common features, each group of skeletons also has specific features.

Typologically speaking, the populations appear polymorphous and they belong to the large Europoid group. Based on the incidence recorded for each group, the typological features associated with these populations define the main biological background and the general typological array.

In the osteological series discovered on the premises of the Banu Church necropolis (Iași), the dimensional and conformational morphometric analysis reveals a typological variability, where we observe the presence of exclusively Europoid-Dinaric, Mediterranean, Alpine and seldom Nordic or East-Europoid influences which could lead to the idea of a Dinaric-Mediterranean-Alpine background, since the Alpine elements are well represented in this group [9]. In the series exhumed from the eastern part of “Curtea Domnească”, the anthropological features

identified in the osteological series indicate the presence of a Dinaric-Mediterranean-Alpine background, where we also encounter East-Europoid and seldom Nordic influences.

In most of the skeletons, we don't encounter a single element, so we can't speak of a specific classic type (Dinaric, Mediterranean, Alpine, etc.). We usually observe a mixture of two or three elements, for example: Dinaric-Mediterranean with Alpine or East-Europoid influences, Mediterranean-Dinaric with other influences, Mediterranean-Alpine, etc. [8]. In the series from "Sfântul Nicolae – Ciurchi" Church – Iași, the authors of the study [21], support the presence of a Mediterranean-Dinaric background, complemented by Nordoid, Alpine or East-Europoid influences. This suggests a mixture of features and, implicitly, a mixture of populations, which is probably due to the fact that the region was in the middle of an urbanization process at that time.

In the urban series from Siret, the archeologists observed the existence of a Nordic-Mediterranean background, which also includes some Dinaric features (illustrated by a tendency towards brachycephaly, hypsicephaly and tall statures). Proto-Europoid features are mainly observed in males, whereas in females we also identified some East-Europoid and Alpine influences [6]. The same background defines the rural series from Răchiteni, where Dinaric elements have the highest incidence (ca. 46%), followed by local elements – brachycephalized and gracilized Mediterranean and Proto-Europoid features (ca. 22%); East-Europoid and Nordic influences have a lower incidence (ca. 18% for the former and ca. 13% for the latter). Mongoloid features were identified in a single male skeleton [14]. Typologically speaking, the osteological series from Vânători (Galați) can be defined as a Mediterranean-Dinaric-Alpine anthropological complex, in which we observe a significant incidence of the local Mediterranean features [15].

#### 4. CONCLUSIONS

The analysis of the dimensional and conformational data pertaining to the series exhumed from the Banu Church necropolis (Iași) revealed interesting results. If we compare them to the data gathered from other urban (the necropolis of "Sfântul Nicolae – Ciurchi" Church, the necropolis discovered in the eastern part of the ancient "Curtea Domnească" – Iași) or rural (Siret, Răchiteni and Vânători – located in the Central Moldavian Plateau) synchronous series, we can observe many bio-typological similarities.

The study of the morphometric and descriptive features shows that both the urban and the rural populations who lived during the Middle Ages are defined by meso-brachyranic, ortho-hypsicranic or tapeino-metricranic skullcaps, average or large occipital bones, meso-uryprosopic or mesene faces with meso-hypsiconceone orbits, meso-leptorrhine (rarely camerrhine) nose, orthognathic profiles and over-average or tall statures.

Typologically speaking, although we encounter some specific features within each group, the structural elements mainly define the same bio-typological background: either Dinaric- Mediterranean-Alpine, as in the Banu Church necropolis and the necropolis discovered in the eastern part of the ancient “Curtea Domneasă”, or Mediterranean-Dinaric, with Nordoid or Alpine influences, as in the necropolis of “Sfântul Nicolae – Ciurchi” Church, or Nordic-Mediterranean with a significant number of Dinaric features, as in the urban series from Siret, or Dinaric-Mediterranean-Proto-Europoid (with East-Europoid and Nordoid influences), as in the rural series from Răchiteni.

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