

**TABLE 2a.** Bird remains identified in layers 19–8 (fauna complexes IX–V) in Bišnik Cave. Categories of habitat (see Material and Methods): A, amphibious; E, ecotone; F, forest; O, open; T, tundra. To exclude double counting of remains, before computing the minimum number of individuals (MNI) for mixed complexes it was always checked whether the remains from mixed sediments may have belonged to birds from layers with well-defined stratigraphy.

Taxa No.	Taxon	Habitat	Complex IX				Complex VIII		Complex VII		Complex VI			Complex V				
			NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP			MNI		
			19	18	18-19	18-19	15	15	14	14	13	12	12-13	12-13	11	10	9	8
<b>Podicipediformes</b>																		
1	cf. <i>Podiceps cristatus/griseogen</i>	A																
<b>Anseriformes</b>																		
2	<i>Anser/Branta</i>	A													1			1
3	<i>Branta bernicla</i>	T																
	cf. <i>Branta bernicla</i>	T																
4	<i>Tadorna tadorna</i>	A																
5	cf. <i>Anas strepera</i>	A																
6	<i>Anas crecca</i>	A																
7	<i>Anas platyrhynchos</i>	A													1			1
	cf. <i>Anas platyrhynchos</i>	A						1	1		1	1						
8	<i>Anas querquedula</i>	A									1	1						
	<i>Anas querquedula/crecca</i>	A				1	1				1	1		4				3
9	<i>Anas clypeata</i>	A																
	<i>Anas cf. clypeata</i>	A																
	<i>Anas sp.</i>	A																
10	<i>Aythya fuligula</i>	A									1	1						
11	<i>Melanitta nigra</i>	A																
12	<i>Melanitta fusca</i>	A																
13	<i>Bucephala clangula</i>	A																
	cf. <i>Bucephala clangula</i>	A																
14	<i>Mergellus albellus</i>	A												1			1	2
15	cf. <i>Mergus merganser</i>	A																
	<i>Anatinae</i> indet.	A									1			1				
<b>Falconiformes</b>																		
16	<i>Circus sp.</i>	O																
17	<i>Accipiter nisus</i>	E																
	cf. <i>Accipiter nisus</i>	E	1		1													
18	<i>Accipiter gentilis</i>	E																
19	<i>Buteo buteo</i>	E																
	<i>Buteo buteo/lagopus</i>	E																
20	cf. <i>Aquila heliaca</i>	E																
	<i>Aquila sp.</i>	E																
21	<i>Falco tinnunculus</i>	E	3	2	4						1	1		2				1
22	<i>Falco tinnunculus atavus</i>																	

Taxa No.	Taxon	Habitat	Complex IX				Complex VIII		Complex VII		Complex VI			Complex V						
			NISP		MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP		NISP			MNI			
			19	18-19	18-19	15	15	14	14	13	12-13	12-13	11	10	9	8-11	8-11			
	<i>Falco cf. tinnunculus</i>	E		1		1														
23	<i>Falco cf. subbuteo</i>	E																		
24	<i>Falco peregrinus</i>	F																		
25	<i>Falco cf. rusticolus</i>	T	2			1														
	<i>Falco sp.</i>			1																
	<i>Falconiformes middle size</i>																			
	<i>Falconiformes small size</i>																			
<b>Galliformes</b>																				
26	<i>Lagopus lagopus</i>	T	7	2	1	3	15	2	1	1		2	18	3		10	12	1	2	5
27	<i>Lagopus muta</i>	T		1		1	2	2								1			3	2
	<i>Lagopus sp.</i>	T	8				4					8				13	1		1	
28	<i>Tetrao tetrix</i>	F	4	6	3	2	9	2	3	1	2	6	15	3	2	9	2		1	3
29	<i>Tetrao urogallus</i>	F	1			1					1	1	2	2		2			5	1
	<i>Tetrao sp.</i>	F	1	1																
	<i>Tetrao/Lagopus</i>		3						1				1						1	
30	<i>Bonasa bonasia</i>	F		1		1														
31	<i>Perdix perdix</i>	O																	1	1
32	<i>Coturnix coturnix</i>	O					1	1												
33	<i>Gallus gallus</i>																			
	<i>Galliformes indet.</i>								1			2								
<b>Gruiformes</b>																				
34	<i>Rallus aquaticus</i>	A																		
35	<i>Porzana porzana</i>	A																		
36	<i>Crex crex</i>	A			1	1	1	1												
<b>Charadriiformes</b>																				
37	<i>cf. Charadrius morinellus</i>	T									1			1						
38	<i>Pluvialis apricaria</i>	T					2	2												
39	<i>Pluvialis squatarola</i>	T																		
40	<i>Vanellus vanellus</i>	A					1	1										1		1
	<i>cf. Vanellus vanellus</i>	A	1			1														
41	<i>Philomachus pugnax</i>	A										1	1							
42	<i>Gallinago media</i>	A																		
	<i>cf. Gallinago media</i>	A																		
43	<i>Scolopax rusticola</i>	F	1			1						2	1							
44	<i>cf. Limosa limosa</i>	A																		
45	<i>Tringa totanus/erythropus</i>	A																		
46	<i>Tringa ochropus</i>	A										1	1							
47	<i>Arenaria interpres</i>	T																		
48	<i>Stercorarius sp.</i>	A																		
49	<i>Rissa tridactyla</i>	A																		
	<i>Charadriiformes indet.</i>	A					3													

Taxa No.	Taxon	Habitat	Complex IX				Complex VIII		Complex VII		Complex VI			Complex V				
			NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP					MNI
			19	18	18-19	15	14	13	12	12-13	11	10	9	8	8-11	8-11		
<b>Columbiformes</b>																		
50	<i>Columba palumbus</i>	F	1		1													
<b>Cuculiformes</b>																		
51	<i>Cuculus canorus</i>	E																
<b>Strigiformes</b>																		
52	<i>Bubo bubo</i>	F																
53	<i>Strix aluco</i>	E								1	1							
54	<i>Strix uralensis</i>	F							1		1			1	1			
55	cf. <i>Strix nebulosa</i>	F																
	cf. <i>Strix</i> sp.		1		1													
56	<i>Surnia ulula</i>	F								2	1							
57	<i>Asio flammeus</i>	A								1	1							
	cf. <i>Asio flammeus</i>	A							1	1	1							
	<i>Asio flammeus/Asio otus</i>																	
58	<i>Aegolius funereus</i>	F											1					
	<i>Strigiformes</i> middle size													1				
<b>Apodiformes</b>																		
59	<i>Tachymarptis melba</i>	O								1	1							
<b>Piciformes</b>																		
60	<i>Dryocopus martius</i>	F																
61	<i>Dendrocopos major</i>	F				1	1											
<b>Passeriformes</b>																		
62	<i>Alauda arvensis</i>	O	1		1					1	1							
63	<i>Lullula arborea</i>	E																
	<i>Alaudidae</i> indet.																	
64	<i>Hirundo/Cecropis</i>	O	1	1	2	2	1			1	1			1	1			
65	<i>Anthus</i> sp.		1		1													
66	<i>Motacilla</i> cf. <i>cinerea</i>	A																
67	<i>Cinclus cinclus</i>	A																
68	<i>Turdus viscivorus</i>	F				1	1											
	<i>Turdus viscivorus/pilaris</i>																	
69	<i>Turdus philomelos</i>	F							1	1	1							
70	<i>Turdus iliacus</i>	F																
71	<i>Turdus pilaris</i>	E																
72	<i>Turdus merula</i>	F																
	<i>Turdus</i> sp.									2		1	1					
73	cf. <i>Luscinia</i> sp.	E																
74	cf. <i>Erithacus rubecula</i>	F																
75	<i>Phoenicurus phoenicurus</i>	F																
	<i>Turdidae</i> (small) indet.					1	1			1	1							
76	<i>Acrocephalus arundinaceus</i>	A												2	2			
	cf. <i>Acrocephalus arundinaceus</i>	A								1	1							

Taxa No.	Taxon	Habitat	Complex IX				Complex VIII		Complex VII		Complex VI			Complex V						
			NISP		MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP		MNI						
			19	18-19	18-19	15	15	14	14	13	12-13	12-13	11	10	9	8-11	8-11			
77	<i>Oenanthe oenanthe</i>	O																		
78	cf. <i>Sylvia</i> sp.																			
79	<i>Parus major</i>	F																		
80	<i>Parus (Poecile) cf. palustris</i>	F																		
81	cf. <i>Sitta</i> sp.		1		1															
82	<i>Garrulus glandarius</i>	F																		
83	<i>Pica pica</i>	E	1	1	2															
84	<i>Nucifraga caryocatactes</i>	F				1	1													
85	<i>Pyrrhocorax graculus</i>	O																		
	<i>Pyrrhocorax</i> sp.	O								1	1									
86	<i>Corvus monedula</i>	E	2		1	2	1	1	1	1	1	1		1			1			
	<i>Corvus monedula/Pyrrhocorax</i>					9														
	Corvidae (small) indet.		1			10							1	1						
87	<i>Corvus</i> (size <i>corone/frugilegus</i> )	E	1		1															
88	<i>Corvus corax</i>	F	1	1	2					1	1			2			1			
89	<i>Sturnus vulgaris</i>	E		1	1															
90	cf. <i>Montifringilla nivalis</i>	O																		
91	<i>Carduelis chloris</i>	F								1	1									
92	<i>Carduelis flammea</i>	T																		
93	<i>Loxia cf. curvirostra</i>	F								2	1			1			1			
94	<i>Loxia pytyopsittacus</i>	F				1	1													
	<i>Loxia</i> sp.	F				1														
95	<i>Pinicola enucleator</i>	F																		
96	<i>Cocc.coccothraustes</i>	F																		
	cf. <i>Cocc.coccothraustes</i>	F							1		1									
	Fringillidae size <i>Chloris</i>		1		1															
	cf. Fringillidae indet.									1	1									
	Passeriformes indet		3						1											
	Aves indet		7	3		33				6	2			9						
	<b>TOTAL</b>		54	23	5	32	101	19	8	4	8	20	76	36	2	54	24	2	19	29

**TABLE 2b.** Bird remains identified in layers 7–1 (fauna complexes IV–I) in Bišnik Cave. Categories of habitat (see Material and Methods): A, amphibious; E, ecotone; F, forest; O, open; T, tundra. To exclude double counting of remains, before computing the minimum number of individuals (MNI) for mixed complexes it was always checked whether the remains from mixed sediments may have belonged to birds from layers with well-defined stratigraphy. *Total* refers to data from both parts of Table 2 (a and b).

Taxa No.	Taxon	Habitat	Complex IV				Complex III			Complex II		Complex I		Mixed Complexes			Total		
			NISP		MNI	NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP	MNI		
			7	6	6-7 mixed	6-7	4	3	3-4 mixed	3-4	2	2	1	1	1-2 mixed	1-12 mixed	?		
<b>Podicipediformes</b>																			
1	cf. <i>Podiceps cristatus/griseogen</i>	A													1	1	1	1	
<b>Anseriformes</b>																			
2	<i>Anser/Branta</i>	A								1	1				2		4	2	
3	<i>Branta bernicla</i>	T												3	1		3	1	
	cf. <i>Branta bernicla</i>	T		1	1								1	1			3	1	
4	<i>Tadorna tadorna</i>	A												1	1		1	1	
5	cf. <i>Anas strepera</i>	A		1	1								2	1			4	1	
6	<i>Anas crecca</i>	A											2	2			2	2	
7	<i>Anas platyrhynchos</i>	A								2	1	1	2	9	1		15	3	
	cf. <i>Anas platyrhynchos</i>	A							1	1				1			4	3	
8	<i>Anas querquedula</i>	A		1	1				1	1				4			7	3	
	<i>Anas querquedula/crecca</i>	A		1	1				2	1			3	6			18	7	
9	<i>Anas clypeata</i>	A										1		2	3		3	3	
	<i>Anas cf. clypeata</i>	A							1	1				1			2	1	
	<i>Anas sp.</i>	A		2	1								2	1			5	1	
10	<i>Aythya fuligula</i>	A										1					2	1	
11	<i>Melanitta nigra</i>	A												1	1		1	1	
12	<i>Melanitta fusca</i>	A												1	1		1	1	
13	<i>Bucephala clangula</i>	A							1	1				1			2	1	
	cf. <i>Bucephala clangula</i>	A											1	2	2		3	2	
14	<i>Mergellus albellus</i>	A											1	3			6	2	
15	cf. <i>Mergus merganser</i>	A												1	1		1	1	
	<i>Anatinae indet.</i>	A												5			7	0	
<b>Falconiformes</b>																			
16	<i>Circus sp.</i>	O												1	1		1	1	
17	<i>Accipiter nisus</i>	E								1	1						1	1	
	cf. <i>Accipiter nisus</i>	E															1	1	
18	<i>Accipiter gentilis</i>	E										1		1	1		2	1	
19	<i>Buteo buteo</i>	E											1	1	1		2	1	
	<i>Buteo buteo/lagopus</i>	E										1		6			7	0	
20	cf. <i>Aquila heliaca</i>	E											1		1		1	1	
	<i>Aquila sp.</i>	E												1			1	0	
21	<i>Falco tinnunculus</i>	E	1	2	2		1	1	2	1	6	2	4	5	25		54	12	

Taxa No.	Taxon	Habitat	Complex IV				Complex III				Complex II		Complex I		Mixed Complexes			Total		
			NISP		MNI	NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP	MNI			
			7	6	6-7 mixed	6-7	4	3	3-4 mixed	3-4	2	2	1	1	1-2 mixed	1-12 mixed	?	MNI	NISP	MNI
22	<i>Falco tinnunculus atavus</i>																			
	<i>Falco cf. tinnunculus</i>	E												2	2			6	2	
23	<i>Falco cf. subbuteo</i>	E									1	1							1	
24	<i>Falco peregrinus</i>	F													1	1			1	
25	<i>Falco cf. rusticolus</i>	T													1				3	
	<i>Falco sp.</i>				5	1					1		1	4	12			22	1	
	Falconiformes middle size												2					2	0	
	Falconiformes small size												2					2	0	
<b>Galliformes</b>																				
26	<i>Lagopus lagopus</i>	T	1	1	11	3	2	3		2	20	3	7	1	12	13	59		200	23
27	<i>Lagopus muta</i>	T			1	1	2			1	6	1	1	1	3		10		30	9
	<i>Lagopus sp.</i>	T			1			1		4		4		2	7	34			88	0
28	<i>Tetrao tetrix</i>	F			6	1		1		1	23	4	9	2	18	14	80		213	19
29	<i>Tetrao urogallus</i>	F			1	1							4	1	2	3	6		28	6
	<i>Tetrao sp.</i>	F														1			3	0
	<i>Tetrao/Lagopus</i>									1			2			1			10	0
30	<i>Bonasa bonasia</i>	F											6	1	1				8	2
31	<i>Perdix perdix</i>	O													1				2	1
32	<i>Coturnix coturnix</i>	O														1			2	1
33	<i>Gallus gallus</i>									2	1	100	14	33		38			173	15
	Galliformes indet.				1					1		2		3		5			15	0
<b>Gruiformes</b>																				
34	<i>Rallus aquaticus</i>	A												1		3	1		4	1
35	<i>Porzana porzana</i>	A			1	1										2			3	1
36	<i>Crex crex</i>	A								2	2	1	1			4			9	5
<b>Charadriiformes</b>																				
37	cf. <i>Charadrius morinellus</i>	T																	1	1
38	<i>Pluvialis apricaria</i>	T											1	1					5	3
39	<i>Pluvialis squatarola</i>	T			1	1													1	1
40	<i>Vanellus vanellus</i>	A														2			4	2
	cf. <i>Vanellus vanellus</i>	A																	1	1
41	<i>Philomachus pugnax</i>	A			1	1		1	1	1	1	2	1	1		3			10	5
42	<i>Gallinago media</i>	A								2	1	1	1	2		5	3		10	5
	cf. <i>Gallinago media</i>	A								1	1			1	1	1			4	1
43	<i>Scolopax rusticola</i>	F								1	1					1			5	3
44	cf. <i>Limosa limosa</i>	A								1	1								1	1
45	<i>Tringa totanus/erythropus</i>	A														1	1		1	1
46	<i>Tringa ochropus</i>	A																	1	1
47	<i>Arenaria interpres</i>	T					1			1									1	1
48	<i>Stercorarius sp.</i>	A										1	1			1			2	1
49	<i>Rissa tridactyla</i>	A										1	1						1	1
	Charadriiformes indet.	A								2					1	2			8	0

Taxa No.	Taxon	Habitat	Complex IV				Complex III				Complex II		Complex I		Mixed Complexes			Total		
			NISP		MNI	NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP	MNI			
			7	6	6-7 mixed	6-7	4	3	3-4 mixed	3-4	2	2	1	1	1-2 mixed	1-12 mixed	?	MNI	NISP	MNI
<b>Columbiformes</b>																				
50	<i>Columba palumbus</i>	F								1	1	1	1					3	3	
<b>Cuculiformes</b>																				
51	<i>Cuculus canorus</i>	E													1	1		1	1	
<b>Strigiformes</b>																				
52	<i>Bubo bubo</i>	F													1	1		1	1	
53	<i>Strix aluco</i>	E								7	2	4	2	7		4		23	5	
54	<i>Strix uralensis</i>	F																2	2	
55	cf. <i>Strix nebulosa</i>	F											1				1	1	1	
	cf. <i>Strix</i> sp.																	1	1	
56	<i>Surnia ulula</i>	F					1		1			1	1			1		5	3	
57	<i>Asio flammeus</i>	A								2	1	1	1	1		1		6	3	
	cf. <i>Asio flammeus</i>	A												2		2		6	1	
	<i>Asio flammeus/Asio otus</i>													1				1	0	
58	<i>Aegolius funereus</i>	F										1	1		1			2	1	
	Strigiformes middle size													2		1		4	1	
<b>Apodiformes</b>																				
59	<i>Tachymarptis melba</i>	O			1	1									2			4	2	
<b>Piciformes</b>																				
60	<i>Dryocopus martius</i>	F								1	1							1	1	
61	<i>Dendrocopos major</i>	F																1	1	
<b>Passeriformes</b>																				
62	<i>Alauda arvensis</i>	O			1	1						2	1			3		8	4	
63	<i>Lullula arborea</i>	E								1	1							1	1	
	<i>Alaudidae</i> indet.															1		1	0	
64	<i>Hirundo/Cecropis</i>	O								3	2			1	1	2		13	7	
65	<i>Anthus</i> sp.																	1	1	
66	<i>Motacilla</i> cf. <i>cinerea</i>	A										1	1					1	1	
67	<i>Cinclus cinclus</i>	A			1	1												1	1	
68	<i>Turdus viscivorus</i>	F			1	1				1	1	1	1	3	2	2		11	4	
	<i>Turdus viscivorus/pilaris</i>				3	2				1		2	1	1		1		8	3	
69	<i>Turdus philomelos</i>	F			1	1				1	1	2	1		2	5		13	4	
70	<i>Turdus iliacus</i>	F														1	1	1	1	
71	<i>Turdus pilaris</i>	E										5	2	2	1	6		14	2	
72	<i>Turdus merula</i>	F								2	1	2	1					4	2	
	<i>Turdus</i> sp.									1		4		5	2	16		32	0	
73	cf. <i>Luscinia</i> sp.	E													1		1	1	1	
74	cf. <i>Erithacus rubecula</i>	F			1	1												1	1	
75	<i>Phoenicurus phoenicurus</i>	F												1			1	1	1	
	<i>Turdidae</i> (small) indet.							3	2									5	4	
76	<i>Acrocephalus arundinaceus</i>	A																2	2	
	cf. <i>Acrocephalus arundinaceus</i>	A																1	1	

Taxa No.	Taxon	Habitat	Complex IV				Complex III				Complex II		Complex I		Mixed Complexes				Total	
			NISP		MNI	NISP		MNI	NISP	MNI	NISP	MNI	NISP		MNI	NISP		MNI	NISP	MNI
			7	6	6-7 mixed	6-7	4	3	3-4 mixed	3-4	2	2	1	1	1-2 mixed	1-12 mixed	?	MNI	NISP	MNI
77	<i>cf. Oenanthe oenanthe</i>	O							1									1	1	
78	<i>cf. Sylvia sp.</i>								1	1								1	1	
79	<i>Parus major</i>	F									1	1						1	1	
80	<i>Parus (Poecile) cf. palustris</i>	F													2	2		2	2	
81	<i>cf. Sitta sp.</i>																	1	1	
82	<i>Garrulus glandarius</i>	F		1	1						7	1		2	18			28	2	
83	<i>Pica pica</i>	E											1		1			4	2	
84	<i>Nucifraga caryocatactes</i>	F													2			3	1	
85	<i>Pyrrhocorax graculus</i>	O													1	1		1	1	
	<i>Pyrrhocorax sp.</i>	O																1	1	
86	<i>Corvus monedula</i>	E		7	1				4	1	2	1	1	2	26			50	8	
	<i>Corvus monedula/Pyrrhocorax</i>			1														10	0	
	Corvidae (small) indet.			6		2			5		5		3	6	27			67	0	
87	<i>Corvus (size corone/frugilegus)</i>	E																1	1	
88	<i>Corvus corax</i>	F							4	2					2			11	6	
89	<i>Sturnus vulgaris</i>	E		3	2								2	2	5			13	3	
90	<i>cf. Montifringilla nivalis</i>	O							1	1				1	2			4	1	
91	<i>Carduelis chloris</i>	F																1	1	
92	<i>Carduelis flammea</i>	T							1	1								1	1	
93	<i>Loxia cf. curvirostra</i>	F																3	2	
94	<i>Loxia pytyopsittacus</i>	F													1			2	1	
	<i>Loxia sp.</i>	F									1	1		1				3	1	
95	<i>Pinicola enucleator</i>	F													1	1		1	1	
96	<i>Cocc.coccothraustes</i>	F									1	1			1			2	1	
	<i>cf. Cocc.coccothraustes</i>	F																1	1	
	Fringillidae size <i>Chloris</i>																	1	1	
	<i>cf. Fringillidae indet.</i>																	1	1	
	Passeriformes indet								1		1				6			12	0	
	Aves indet						1	1		4		7		6	2	42		123	0	
	<b>TOTAL</b>		2	1	64	29	8	6	6	10	118	40	206	51	133	93	549	35	1582	285