

## SF I: List of the variables and corresponding factor loadings included in PCA analyses 2-6

### PCA 2

	F1	F2	F3
pW	.878	-.067	-.149
m1L	.877	-.156	-.018
Cd4Cd5	.865	-.218	-.102
Cd1Cd3	.847	-.271	-.140
Cd1Cd2	.831	-.314	-.133
z1W	.827	-.068	-.289
m2L	.803	-.111	-.188
Cd1Cd10	.749	-.011	-.382
m1W	.725	-.259	-.560
m2W	.724	-.471	-.443
m3L	.682	-.286	-.342
pL	.623	-.367	-.401
m3W	.633	-.640	-.096

Total	% of Variance	Cumulative	Total
F1	7.890	60.689	60.689
F2	1.180	9.079	69.768
F3	1.131	8.699	78.467

### PCA 5

	F1	F2	F3
TalWm1	.857	-.082	-.359
Cd4Cd5	.794	-.086	-.314
Cd1Cd2	.753	-.302	-.479
TalWm2	.724	-.109	-.574
TrWm2	.721	-.050	-.598
TrWm1	.704	-.382	-.418
Cd1Cd3	.702	-.390	-.469
Cd1Cd10	.680	-.346	-.255
TalLm1	.644	-.404	-.206
Cd6Cd7	.642	-.434	-.184
Cd8Cd9	.566	-.541	-.109
Cd11Cd12	.550	-.388	-.032
TrLm2	.458	-.733	-.012
TrLm1	.583	-.658	-.138
TalLm2	.514	-.568	-.176

Total	% of Variance	Cumulative	Total
F1	6.686	44.574	44.574
F2	2.625	17.497	62.071
F3	1.742	11.611	73.682

### PCA 3

	F1	F2	F3	F4	F5
CdH	.960	-.045	-.115	-.070	-.129
CrH1	.945	-.130	-.005	-.119	-.144
CrH6	.929	-.145	-.039	-.265	-.012
CrH4	.929	-.063	-.104	-.260	-.130
Cd4Cd5	.922	-.137	-.077	-.112	-.167
RM1	.916	-.133	-.235	-.113	-.155
m1L	.891	-.055	-.117	-.143	-.088
Cd1Cd3	.886	-.167	-.033	-.351	-.001
Cd1Cd2	.877	-.192	-.055	-.318	-.033
pL	.844	-.103	-.055	-.230	-.217
RM2	.834	-.115	-.349	-.110	-.183
pW	.810	-.379	-.054	-.251	-.264
CrH3	.792	-.495	-.130	-.159	-.003
CrH5	.778	-.374	-.052	-.237	-.151
m1W	.739	-.088	-.541	-.060	-.163
Cd1Cd10	.736	-.493	-.238	-.040	-.067
CrH2	.690	-.566	-.089	-.160	-.224
z1W	.674	-.544	-.069	-.248	-.279
m3L	.628	-.324	-.354	-.379	-.039
RM3	.648	-.677	-.103	-.212	-.025
m2W	.642	-.041	-.687	-.001	-.091
CdL	.623	-.012	-.553	-.416	-.567
m3W	.472	-.340	-.507	-.019	-.529

Total	% of Variance	Cumulative	%
F1	14.329	62.301	62.301
F2	2.248	9.775	72.075
F3	1.785	7.760	79.836
F4	1.090	4.737	84.573
F5	1.058	4.602	89.175

### PCA 4

	F1
CrH6	.956
CrH4	.951
CrH1	.941
RM1	.930
CrH5	.921
CrH3	.899
RM2	.841
CdH	.835
CrH2	.810
RM3	.736

Total	% of Variance	Cumulative	Total
F1	7.828	78.280	78.280

### PCA 6

	F1	F2
Cd1Cd2	.865	-.444
Cd1Cd10	.824	-.076
Cd4Cd5	.820	-.234
Cd1Cd3	.787	-.551
Cd6Cd7	.772	-.325
CdL	.745	-.144
Cd8Cd9	.622	-.612
Cd11Cd12	.618	-.336

Total	% of Variance	Cumulative	Total
F1	4.637	57.959	57.959
F2	1.175	14.689	72.649

## **SF II: Survey of biometrical data**

- SF IIa: Basic statistics of the extant *Neomys* species
- SF IIb: Basic statistics of particular fossil OTUs
- SF IIc: Basic statistics of extant Oriental species
- SF IId: Biometrical data of individual MN15-Q1 specimens
- SF IIe: Biometrical data of individual Q2 specimens

## SF IIA: Biometrical data of the extant species: A – cranial, rostral and mandibular variables

	<i>Neomys fodiens</i> REC					<i>Neomys milleri</i> REC					<i>Neomys teres</i> REC				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
W1	53	2.66	2.34	3.12	0.148	24	2.54	2.33	2.72	0.117	2	2.73	2.73	2.73	0.000
W2	53	3.46	2.50	3.85	0.217	24	3.23	2.81	3.53	0.177	2	3.31	3.22	3.40	0.127
I1I1	53	2.02	1.60	2.25	0.120	25	1.66	1.50	2.10	0.138	2	2.00	1.97	2.02	0.035
Z1Z1	53	2.31	2.08	2.56	0.090	25	1.90	1.68	2.23	0.115	2	2.15	2.12	2.18	0.042
Z2Z2	53	2.52	2.20	2.80	0.106	78	2.01	1.59	2.35	0.111	2	2.21	2.05	2.36	0.219
Z3Z3	53	2.75	2.51	3.07	0.119	25	2.28	2.10	2.71	0.151	2	2.56	2.51	2.61	0.071
Z4Z4	53	2.76	2.46	3.21	0.163	25	2.54	2.32	2.92	0.144	2	2.85	2.77	2.93	0.113
P4P4	53	5.30	4.96	5.80	0.187	79	4.58	4.17	5.27	0.170	2	5.19	5.16	5.21	0.035
M1M1	53	6.11	5.71	6.61	0.173	26	5.39	5.04	5.95	0.210	2	6.04	5.99	6.09	0.071
M2M2	48	5.98	5.52	6.49	0.209	26	5.38	5.04	5.68	0.140	2	5.97	5.95	5.99	0.028
M3M3	52	5.57	5.05	5.91	0.184	25	5.10	4.76	5.41	0.164	2	5.72	5.68	5.75	0.049
LPa1	53	8.34	7.71	9.31	0.296	25	7.60	6.95	8.45	0.362	2	8.68	8.50	8.86	0.255
LPa2	53	10.04	9.43	10.63	0.287	24	9.38	8.73	10.09	0.342	2	10.71	10.44	10.97	0.375
Lpa11	52	10.93	10.24	13.01	0.644	24	10.20	9.03	11.66	0.892	2	11.17	11.16	11.18	0.014
IP4	53	6.61	6.19	6.98	0.183	78	5.86	5.08	6.69	0.254	2	6.83	6.70	6.95	0.177
IM1	53	8.33	7.81	8.71	0.218	78	7.37	5.49	8.35	0.355	2	8.60	8.50	8.70	0.141
IM2	52	9.66	9.16	10.09	0.214	78	8.72	7.01	9.70	0.358	2	9.39	8.70	10.07	0.969
IM3	53	10.24	9.74	10.77	0.245	76	9.22	8.38	10.29	0.333	2	10.74	10.73	10.74	0.007
P4M1	53	3.63	3.20	3.90	0.128	79	3.20	2.96	3.57	0.110	2	3.71	3.69	3.73	0.028
P4M2	52	4.94	4.46	5.24	0.164	79	4.50	4.17	4.86	0.140	2	5.14	5.04	5.23	0.134
P4M3	53	5.55	5.21	5.99	0.169	77	5.03	4.66	5.52	0.167	2	5.84	5.73	5.94	0.148
M1M2	52	3.14	2.66	3.71	0.154	79	2.90	2.67	3.23	0.108	2	3.32	3.18	3.45	0.191
M1M3	53	4.01	3.29	4.30	0.166	77	3.64	3.39	4.03	0.124	2	4.18	4.09	4.26	0.120
M2M3	53	2.56	2.37	2.82	0.101	76	2.33	2.14	2.59	0.088	2	2.69	2.64	2.73	0.064
LUni	53	3.42	3.03	3.75	0.140	79	3.03	2.69	3.56	0.137	2	5.07	4.96	5.17	0.148
LMol	53	5.54	5.16	5.92	0.167	77	5.05	4.75	5.76	0.163	2	5.85	5.72	5.97	0.177
Cr1	50	0.80	0.48	1.00	0.094	76	0.54	0.37	0.74	0.076	2	0.83	0.79	0.86	0.049
Cr2	50	1.07	0.59	1.70	0.152	73	1.88	0.55	83.00	9.627	2	0.99	0.96	1.01	0.035
Cr3	50	1.30	0.77	1.75	0.157	73	0.98	0.75	1.31	0.122	2	1.28	1.23	1.33	0.071
Cr4	50	1.30	0.79	1.57	0.183	73	1.05	0.61	1.34	0.124	2	1.43	1.27	1.58	0.219
Cr5	50	0.84	0.37	1.37	0.188	76	0.62	0.37	0.84	0.105	2	0.81	0.69	0.93	0.170
CdL (lat)	50	1.49	1.13	1.82	0.145	78	1.27	0.97	1.55	0.130	2	1.41	1.18	1.63	0.318
CdH1	50	1.76	1.25	2.68	0.202	78	1.61	1.27	1.88	0.127	2	1.81	1.80	1.82	0.014
CdH2	50	1.52	0.96	1.86	0.139	78	1.26	0.99	1.51	0.116	2	1.41	1.29	1.53	0.170
AngL	47	2.21	1.51	2.59	0.189	53	2.06	1.85	2.59	0.126	1	2.32	2.32	2.32	0.000
RmL	50	2.24	1.43	4.77	0.401	79	1.97	1.57	2.25	0.116	2	2.27	2.09	2.45	0.255
CorH	49	4.77	4.14	5.14	0.200	79	4.13	3.89	4.52	0.128	2	4.54	4.44	4.64	0.141
FM	50	5.33	1.41	6.06	0.813	72	5.38	4.33	6.20	0.284	2	6.07	5.84	6.29	0.318
Lz1-m3	51	6.35	3.95	6.87	0.604	78	5.83	5.19	6.11	0.166	2	6.62	6.60	6.63	0.021
Hmd	52	1.47	0.93	1.96	0.187	79	1.34	1.14	1.71	0.119	2	1.48	1.46	1.50	0.028
Lzp	49	2.32	2.08	2.52	0.100	79	1.98	1.76	2.17	0.081	2	2.23	2.18	2.28	0.071
m1m3	49	4.31	3.84	4.65	0.173	79	4.02	2.98	4.32	0.159	2	4.59	4.45	4.73	0.198
CdL(ling)	5	1.46	1.27	1.66	0.139	79	1.32	1.03	1.55	0.118	2	1.36	1.27	1.45	0.127
CdH	5	3.67	3.57	3.77	0.073	79	3.25	3.01	3.70	0.142	2	3.63	3.58	3.68	0.071
RM1	5	4.50	4.33	4.58	0.097	80	4.05	3.64	4.49	0.166	2	4.69	4.62	4.76	0.099
RM2	5	3.39	3.18	3.51	0.128	80	3.04	2.68	3.40	0.148	2	3.42	3.36	3.48	0.085
RM3	5	2.52	2.31	2.68	0.145	74	2.32	1.96	2.77	0.161	2	2.70	2.54	2.86	0.226
CrH1	5	4.68	4.40	4.79	0.159	79	4.02	3.80	4.49	0.143	2	4.46	4.34	4.57	0.163
CrH2	5	4.60	4.18	4.77	0.254	79	4.07	3.80	4.56	0.148	2	4.54	4.49	4.58	0.064
CrH3	5	2.72	2.61	2.85	0.111	79	2.37	2.14	2.73	0.103	2	2.69	2.69	2.69	0.000
CrH4	5	4.13	3.98	4.21	0.093	79	3.46	3.17	3.90	0.148	2	4.01	3.91	4.10	0.134
CrH5	5	3.73	3.41	3.91	0.203	79	3.26	2.96	3.90	0.152	2	3.73	3.57	3.88	0.219
CrH6	5	3.11	2.94	3.39	0.182	79	2.85	2.44	3.74	0.165	2	3.30	3.27	3.32	0.035
mdL1	5	11.28	11.08	11.64	0.222	80	10.34	9.53	11.08	0.287	2	11.93	11.79	12.07	0.198
mdL2	5	10.40	10.18	10.82	0.266	80	9.51	8.66	10.22	0.289	2	10.93	10.80	11.06	0.184
mdL3	5	9.87	9.75	10.03	0.119	79	8.95	2.40	9.69	0.788	2	10.59	10.58	10.59	0.007
mdL4	5	7.05	6.79	7.37	0.232	80	6.52	5.96	7.09	0.224	2	7.52	7.51	7.53	0.014
mdL5	5	8.76	8.45	9.29	0.315	79	8.24	7.63	8.84	0.249	2	9.43	9.27	9.58	0.219
mdL1m1	5	8.77	8.65	8.92	0.114	79	8.16	7.71	10.31	0.311	2	9.28	9.04	9.51	0.332
mdL2m1	5	7.97	7.80	8.18	0.156	79	7.36	6.91	9.63	0.311	2	8.33	8.12	8.53	0.290
mdL3m1	5	7.35	7.17	7.57	0.163	79	6.79	4.38	9.14	0.420	2	7.90	7.82	7.97	0.106
mdL4m1	5	4.66	4.49	4.81	0.148	79	4.37	3.99	6.76	0.381	2	4.94	4.89	4.99	0.071
mdL5m1	5	6.49	6.28	6.68	0.147	79	6.20	5.84	8.12	0.263	2	6.96	6.75	7.16	0.290
mdL1m2	5	7.13	6.90	7.32	0.155	79	6.70	6.29	8.01	0.235	2	7.63	7.42	7.83	0.290
mdL2m2	5	6.29	6.10	6.53	0.169	79	5.91	5.48	7.43	0.263	2	6.71	6.47	6.94	0.332
mdL3m2	5	5.77	5.68	5.92	0.098	79	5.39	4.96	7.01	0.242	2	6.24	6.21	6.27	0.042
mdL4m2	5	2.99	2.85	3.10	0.098	79	2.94	2.62	4.80	0.319	2	3.31	3.19	3.42	0.163
mdL5m2	5	4.89	4.63	5.15	0.190	79	4.77	2.96	6.14	0.291	2	5.32	5.10	5.54	0.311
mdL1m3	5	5.74	5.57	5.96	0.141	79	5.40	5.09	5.83	0.155	2	6.15	5.99	6.30	0.219
mdL2m3	5	4.81	4.61	5.14	0.199	79	4.50	4.15	4.89	0.148	2	5.07	4.90	5.24	0.240
mdL3m3	5	4.35	4.14	4.53	0.142	79	4.08	3.73	4.43	0.142	2	4.66	4.64	4.68	0.028
mdL4m3	5	1.52	1.42	1.71	0.122	79	1.58	1.25	3.52	0.417	2	1.70	1.68	1.72	0.028
mdL5m3	5	3.41	3.07	3.81	0.276	79	3.32	1.50	3.68	0.367	2	3.76	3.56	3.95	0.276
symfL	5	2.55	2.29	2.92	0.255	74	2.02	1.65	2.70	0.221	2	2.35	2.31	2.39	0.057
symfW	5	0.43	0.35	0.53	0.075	76	0.34	0.20	0.59	0.078	2	0.42	0.36	0.48	0.085
CrW1	5	0.85	0.79	0.92	0.059	79	0.58	0.39	0.75	0.075	2	0.90	0.89	0.90	0.007
CrW2	5	1.01	0.90	1.12	0.085	79	0.75	0.60	1.00	0.071	2	1.00	0.97	1.03	0.042
fpL	5	0.99	0.95	1.03	0.036	79	0.96	0.81	1.11	0.061	2	1.10	1.09	1.10	0.007
fpH	5	0.77	0.59	0.93	0.156	79	0.73	0.51	0.92	0.100	2	0.86	0.82	0.90	0.057
mdH1	5	1.61	1.48	1.70	0.083	79	1.39	1.31	1.62	0.154	2	1.56	1.55	1.56	0.007
mdH2	5	1.47	1.36	1.59	0.087	79	1.29	1.08	1.61	0.101	2	1.46	1.41	1.50	0.064
mdH3	5	1.44	1.32	1.52	0.074	79	1.36	1.14	1.65	0.095	2	1.51	1.49	1.53	0.028
Cd1Cd2	53	2.49	2.13	2.77	0.121	77	2.11	1.78	2.34	0.117	2	2.32	2.31	2.32	0.007
Cd1Cd3	53	2.15	1.94	2.31	0.088	80	1.81	1.55	2.21	0.122	2	1.99	1.91		

**SF IIa: Biometrical data of the extant species: B – dental variables (maxillary unicuspid, maxillary molars, mandibular unicuspid)**

	<i>Neomys fodiens</i> REC					<i>Neomys milleri</i> REC					<i>Neomys teres</i> REC				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
LI1	53	1.52	1.13	1.76	0.121	25	1.26	1.01	1.55	0.127	2	1.60	1.52	1.68	0.113
LZ1	53	1.01	0.68	1.63	0.121	26	0.95	0.80	1.10	0.077	2	1.10	1.06	1.14	0.057
LZ2	53	1.01	0.87	1.26	0.081	26	0.89	0.76	1.00	0.059	2	1.11	1.03	1.18	0.106
LZ3	52	0.81	0.66	1.04	0.076	26	0.69	0.58	0.88	0.069	2	0.84	0.72	0.95	0.163
LZ4	53	0.66	0.46	0.81	0.072	26	0.62	0.51	0.75	0.062	2	0.50	0.42	0.57	0.106
I1W1	53	0.52	0.32	0.63	0.065	20	0.39	0.29	0.50	0.050	2	0.89	0.46	1.32	0.608
I1W2	53	0.52	0.43	0.66	0.049	20	0.36	0.31	0.52	0.057	2	1.34	0.56	2.11	1.096
I1W3	53	0.71	0.52	0.83	0.050	19	0.57	0.51	0.69	0.037	2	1.32	0.66	1.98	0.933
Z1W	53	0.79	0.68	0.91	0.041	21	0.62	0.36	0.74	0.070	2	1.47	0.76	2.17	0.997
Z2W	53	0.79	0.70	0.88	0.039	21	0.61	0.32	0.73	0.077	2	1.40	0.70	2.10	0.990
Z3W	53	0.76	0.67	0.85	0.039	21	0.60	0.55	0.71	0.039	2	1.56	0.69	2.42	1.223
Z4W	53	0.61	0.37	0.76	0.079	21	0.56	0.46	0.68	0.054	2	1.70	0.59	2.80	1.563
Z1Lx	53	1.23	1.09	1.41	0.068	20	1.01	0.59	1.19	0.113	2	1.12	1.08	1.15	0.049
Z2Lx	53	1.19	1.05	1.40	0.071	21	0.96	0.60	1.13	0.097	2	1.07	1.06	1.07	0.007
Z3Lx	53	1.02	0.67	1.14	0.075	21	0.82	0.58	1.02	0.080	2	0.89	0.87	0.90	0.021
I1_2	48	2.03	0.91	2.40	0.307	19	1.73	1.26	1.99	0.170	2	1.86	1.85	1.86	0.007
I1_3	48	1.31	0.89	1.58	0.143	20	1.16	0.85	1.34	0.119	2	1.28	1.20	1.36	0.113
I1_4	48	1.12	0.93	1.33	0.093	20	0.97	0.87	1.14	0.072	2	1.16	1.13	1.19	0.042
I1dist_1	41	0.49	0.25	0.68	0.083	21	0.43	0.23	0.53	0.078	2	0.44	0.42	0.45	0.021
I1dist_2	41	0.70	0.25	1.29	0.169	21	0.61	0.47	0.74	0.078	2	0.48	0.44	0.52	0.057
I1dist_3	41	0.81	0.51	0.98	0.112	21	0.71	0.60	0.81	0.055	2	0.66	0.60	0.71	0.078
WZ1	49	1.06	0.83	1.28	0.092	21	0.97	0.88	1.21	0.089	2	1.06	0.97	1.14	0.120
WZ2	49	1.01	0.70	1.13	0.085	21	0.90	0.84	1.05	0.057	2	0.94	0.70	1.18	0.339
WZ3	49	0.78	0.54	0.93	0.062	21	0.68	0.54	0.89	0.081	2	0.86	0.78	0.93	0.106
WZ4	38	0.36	0.24	0.55	0.073	21	0.43	0.28	0.53	0.071	2	0.44	0.32	0.55	0.163
HI1	51	1.99	1.01	2.34	0.280	20	1.65	0.80	2.17	0.257	2	1.73	1.69	1.77	0.057
WI1	53	0.54	0.28	0.61	0.046	20	0.43	0.34	0.56	0.044	2	0.54	0.53	0.55	0.014
WP4	48	1.71	1.43	1.99	0.116	21	1.53	1.34	1.96	0.134	2	1.85	1.83	1.86	0.021
WM1	48	1.72	1.36	1.86	0.085	21	1.54	1.36	1.72	0.085	2	1.76	1.74	1.78	0.028
WM2	44	1.38	0.98	1.58	0.106	18	1.35	1.20	1.47	0.078	2	1.59	1.49	1.68	0.134
WM3	6	0.63	0.48	0.84	0.139	1	0.28	0.28	0.28	0.000	1	0.46	0.46	0.46	0.000
LP4	53	1.97	1.82	2.19	0.076	79	1.73	1.58	1.93	0.066	2	1.99	1.98	2.00	0.014
LM1	53	1.74	1.56	1.87	0.070	79	1.54	1.38	1.74	0.063	2	1.77	1.73	1.81	0.057
LM2	52	1.45	1.16	1.55	0.072	79	1.41	1.26	1.58	0.063	2	1.55	1.47	1.62	0.106
LM3	53	0.80	0.63	1.00	0.066	25	0.78	0.51	0.87	0.070	2	0.89	0.87	0.90	0.021
P4W1	47	0.85	0.69	0.98	0.065	21	0.74	0.61	0.97	0.074	2	0.84	0.83	0.84	0.007
P4W1x	48	1.28	1.03	1.54	0.118	20	1.15	1.04	1.35	0.089	2	1.32	1.28	1.36	0.057
P4W2x	48	1.92	1.75	2.10	0.081	78	1.60	1.39	2.00	0.088	2	1.94	1.93	1.94	0.007
P4Wdi	48	1.02	0.85	1.83	0.147	21	0.94	0.86	1.04	0.058	2	1.11	1.10	1.11	0.007
P4W2	48	1.98	1.78	2.21	0.098	78	1.73	1.53	1.97	0.077	2	1.94	1.94	1.94	0.000
P4Lc	48	1.27	1.13	1.46	0.068	21	1.13	1.04	1.27	0.060	2	1.24	1.23	1.25	0.014
P4Lx	48	1.40	1.22	1.56	0.071	21	1.17	1.04	1.52	0.100	2	1.44	1.42	1.46	0.028
M1W1	48	1.73	1.59	1.90	0.061	78	1.54	1.32	1.81	0.075	2	1.70	1.66	1.73	0.049
M2W1	48	1.79	1.65	1.96	0.067	78	1.62	1.40	1.80	0.074	2	1.96	1.90	2.02	0.085
M1W2	48	1.97	1.82	2.13	0.070	78	1.75	1.56	1.92	0.066	2	1.98	1.91	2.05	0.099
M2W2	48	1.61	1.37	1.77	0.088	77	1.53	1.35	1.97	0.082	2	1.69	1.67	1.71	0.028
M1W1x	45	1.47	1.36	1.57	0.050	20	1.33	1.23	1.49	0.062	2	1.48	1.43	1.52	0.064
M2W1x	44	1.55	1.45	1.67	0.051	20	1.43	1.35	1.55	0.056	2	1.65	1.60	1.69	0.064
M1W2x	48	2.22	2.04	2.36	0.085	78	1.96	1.67	2.23	0.081	2	2.21	2.17	2.24	0.049
M2W2x	48	2.09	1.90	2.29	0.079	78	1.92	1.53	2.11	0.083	2	2.24	2.24	2.24	0.000
M1Lx	48	1.44	1.28	1.58	0.060	21	1.29	1.22	1.44	0.058	2	1.49	1.47	1.50	0.021
M2Lx	48	1.34	1.21	1.45	0.046	21	1.24	1.18	1.32	0.031	2	1.47	1.44	1.50	0.042
M1PaL	48	0.76	0.64	0.89	0.043	21	0.67	0.61	0.78	0.044	2	0.80	0.79	0.80	0.007
M2PaL	48	0.72	0.62	0.86	0.043	21	0.71	0.61	0.82	0.044	2	0.80	0.79	0.80	0.007
M1MeL	48	0.97	0.85	1.10	0.044	21	0.88	0.79	1.03	0.050	2	1.00	0.96	1.04	0.057
M2MeL	48	0.69	0.59	0.81	0.040	21	0.71	0.63	1.00	0.077	2	0.80	0.71	0.89	0.127
C	48	0.96	0.82	1.16	0.063	21	0.83	0.64	0.99	0.062	2	1.00	0.98	1.01	0.021
M2PaC	48	0.98	0.75	1.26	0.074	21	0.87	0.67	0.95	0.054	2	1.12	1.04	1.19	0.106
M1MeC	48	1.22	0.92	1.33	0.078	21	1.09	0.82	1.24	0.078	2	1.13	1.03	1.23	0.141
M2MeC	48	1.00	0.82	1.14	0.067	21	0.94	0.69	1.07	0.083	2	1.04	1.03	1.05	0.014
M3W1	46	1.40	1.28	1.56	0.060	15	1.23	0.77	1.37	0.145	2	1.50	1.49	1.51	0.014
M3Lx	46	1.08	0.95	1.24	0.063	19	1.48	0.78	9.96	2.057	2	1.24	1.22	1.26	0.028
i1Lx	53	2.47	1.57	2.90	0.278	76	2.02	0.84	2.48	0.319	2	1.98	1.79	2.16	0.262
i1L	53	4.56	3.02	5.03	0.357	79	3.98	3.47	4.39	0.199	2	4.08	3.65	4.50	0.601
i1Lprim	53	1.76	1.13	2.18	0.221	78	1.63	0.91	1.99	0.259	2	1.66	1.44	1.87	0.304
i1Lsek	53	0.55	0.26	0.91	0.163	78	0.50	0.12	0.93	0.174	2	0.55	0.41	0.68	0.191
z1L	53	1.39	0.96	1.62	0.131	77	1.14	0.95	1.28	0.064	2	1.30	1.19	1.40	0.148
pL	52	1.07	0.67	1.36	0.141	79	0.99	0.86	1.20	0.064	2	1.04	1.01	1.06	0.035
i1Lc	50	2.36	1.85	2.82	0.177	79	1.92	0.94	2.32	0.187	2	1.99	1.79	2.19	0.283
i1H1	50	0.98	0.77	1.22	0.081	77	0.85	0.70	0.96	0.049	2	0.87	0.81	0.93	0.085
i1H2	50	0.95	0.82	1.07	0.056	78	0.87	0.76	2.61	0.203	2	1.01	1.00	1.02	0.014
z1H1	50	0.72	0.43	0.96	0.109	79	0.59	0.35	0.77	0.087	2	0.43	0.35	0.50	0.106
z1H2	50	0.63	0.49	0.89	0.057	79	0.49	0.39	0.66	0.048	2	0.49	0.47	0.51	0.028
pH	50	1.11	0.79	1.40	0.149	80	0.87	0.63	1.18	0.093	2	0.81	0.73	0.89	0.113
Hcingz1	50	0.20	0.13	0.27	0.029	79	0.17	0.10	0.24	0.031	2	0.17	0.15	0.18	0.021
Hcingp	49	0.21	0.13	0.29	0.028	78	0.18	0.10	0.27	0.029	2	0.20	0.19	0.20	0.007
i1L (occ)	51	2.99	2.29	3.35	0.215	79	2.82	2.07	3.13	0.190	2	2.97	2.83	3.11	0.198
z1L (occ)	51	0.98	0.80	1.12	0.065	80	0.75	0.59	0.95	0.078	2	1.01	0.95	1.06	0.078
pL (occ)	50	0.99	0.86	1.18	0.078	80	0.95	0.84	1.14	0.053	2	1.10	1.08	1.12	0.028
z1W (occ)	51	0.70	0.61	0.79	0.040	80	0.57	0.40	0.67	0.055	2	0.67	0.64	0.69	0.035
pW (occ)	51	0.80	0.68	0.92	0.056	80	0.65	0.51	0.85	0.049	2	0.74	0.72	0.76	0.028

## SF IIa: Biometrical data of the extant species: C – dental variables (mandibular molars), proportions and pigmentation

	<i>Neomys fodiens</i> REC					<i>Neomys milleri</i> REC					<i>Neomys teres</i> REC				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
m1L	53	1.67	1.15	1.91	0.133	79	1.55	1.40	1.72	0.069	2	1.80	1.73	1.86	0.092
m2L	53	1.50	1.01	1.68	0.123	80	1.41	1.28	1.56	0.057	2	1.63	1.59	1.66	0.049
m3L	53	1.16	0.83	1.30	0.092	78	1.13	0.96	1.23	0.051	2	1.28	1.25	1.31	0.042
HCingm1	51	0.95	0.68	1.10	0.093	80	0.87	0.66	1.16	0.098	2	0.89	0.82	0.96	0.099
HCingm2	51	0.96	0.74	1.11	0.091	80	0.88	0.67	1.06	0.081	2	0.96	0.88	1.04	0.113
HCingm3	51	0.80	0.65	0.97	0.082	80	0.70	0.58	0.91	0.063	2	0.77	0.70	0.84	0.099
HTrm1	49	1.39	0.09	1.75	0.284	80	1.20	0.67	1.46	0.144	2	1.31	1.30	1.31	0.007
HTal1	50	1.09	0.60	1.38	0.179	80	0.91	0.46	1.15	0.134	2	1.11	1.07	1.15	0.057
HTrm2	50	1.21	0.48	1.53	0.227	80	1.06	0.44	1.31	0.166	2	1.18	1.09	1.26	0.120
HTal2	50	0.91	0.39	1.21	0.193	80	0.80	0.30	0.99	0.142	2	1.03	1.02	1.04	0.014
HTrm3	50	0.85	0.25	1.22	0.201	80	0.77	0.31	1.00	0.137	2	0.95	0.89	1.01	0.085
HTal3	49	0.51	0.20	0.78	0.129	76	0.46	0.18	0.62	0.092	2	0.63	0.62	0.64	0.014
TrLm1	53	0.96	0.83	1.06	0.050	80	0.86	0.74	0.98	0.041	2	1.05	0.98	1.11	0.092
TalLm1	53	0.79	0.64	0.90	0.058	80	0.73	0.58	0.88	0.047	2	0.79	0.76	0.81	0.035
TrWm1	53	0.86	0.72	1.07	0.070	80	0.79	0.65	0.94	0.059	2	0.93	0.90	0.96	0.042
TalWm1	53	1.06	0.90	1.14	0.054	80	0.96	0.79	1.11	0.058	2	1.08	1.07	1.09	0.014
TrLm2	53	0.78	0.64	0.89	0.051	80	0.74	0.67	0.85	0.036	2	0.85	0.82	0.88	0.042
TalLm2	53	0.72	0.55	0.83	0.070	80	0.68	0.52	0.78	0.057	2	0.70	0.70	0.70	0.000
TrWm2	53	0.90	0.73	1.08	0.063	80	0.82	0.70	0.96	0.051	2	0.96	0.90	1.02	0.085
TalWm2	53	0.99	0.81	1.09	0.057	80	0.93	0.61	1.06	0.064	2	1.05	1.02	1.07	0.035
TrLm3	51	0.65	0.55	0.75	0.041	80	0.62	0.53	0.77	0.045	2	0.75	0.71	0.78	0.049
TalLm3	50	0.55	0.38	0.66	0.050	80	0.55	0.39	0.70	0.048	2	0.57	0.57	0.57	0.000
TrWm3	51	0.71	0.61	0.97	0.060	80	0.65	0.54	0.76	0.045	2	0.78	0.74	0.81	0.049
TalWm3	50	0.58	0.40	0.81	0.087	80	0.52	0.40	0.68	0.052	2	0.65	0.63	0.67	0.028
Wm1Tal	53	0.75	0.00	0.94	0.250	79	0.70	0.59	0.90	0.057	1	0.78	0.78	0.78	0.000
Wm2Tal	41	0.74	0.61	0.90	0.064	78	0.65	0.54	0.77	0.052	1	0.73	0.73	0.73	0.000
m1l (occ)	51	1.73	1.52	1.89	0.068	80	1.58	1.42	1.76	0.057	2	1.81	1.75	1.87	0.085
m2L (occ)	51	1.49	1.38	1.61	0.051	80	1.41	1.28	1.56	0.057	2	1.57	1.51	1.62	0.078
m3L (occ)	51	1.22	0.99	1.35	0.065	80	1.16	1.06	1.24	0.041	2	1.30	1.26	1.33	0.049
m1W (occ)	51	0.95	0.68	1.10	0.093	80	0.87	0.66	1.16	0.098	2	0.89	0.82	0.96	0.099
m2W (occ)	51	0.96	0.74	1.11	0.091	80	0.88	0.67	1.06	0.081	2	0.96	0.88	1.04	0.113
m3W (occ)	51	0.80	0.65	0.97	0.082	80	0.70	0.58	0.91	0.063	2	0.77	0.70	0.84	0.099
LUni/Lmol	53	0.62	0.56	0.72	0.028	77	0.60	0.56	0.66	0.022	2	0.87	0.83	0.90	0.052
M1/M13	53	0.43	0.40	0.54	0.019	77	0.42	0.40	0.46	0.012	2	0.42	0.42	0.42	0.000
M2/M13	52	0.36	0.30	0.44	0.019	77	0.39	0.36	0.42	0.014	2	0.37	0.36	0.38	0.014
M3/M13	53	0.20	0.16	0.25	0.015	19	0.21	0.15	0.23	0.018	2	0.21	0.21	0.21	0.000
M3L/M1L	53	0.46	0.36	0.57	0.034	19	0.51	0.33	0.55	0.050	2	0.50	0.50	0.50	0.000
P4L/M2L	52	1.36	1.21	1.64	0.078	79	1.23	1.11	1.35	0.053	2	1.29	1.23	1.35	0.085
M22/M13	48	1.49	1.39	1.61	0.049	19	1.46	1.35	1.58	0.052	2	1.43	1.40	1.46	0.042
M22/M3L	48	7.50	5.99	9.14	0.603	19	6.94	6.22	10.53	0.936	2	6.46	6.39	6.53	0.099
Lzp/m1m3	49	0.54	0.48	0.61	0.029	79	0.49	0.41	0.69	0.033	2	0.49	0.46	0.51	0.036
m1/m13	49	0.40	0.38	0.43	0.014	77	0.39	0.36	0.52	0.018	2	0.40	0.39	0.40	0.007
m2/m13	49	0.35	0.32	0.38	0.013	77	0.35	0.32	0.48	0.019	2	0.34	0.34	0.34	0.000
m3/m13	48	0.28	0.26	0.32	0.013	77	0.29	0.27	0.39	0.015	2	0.28	0.28	0.28	0.000
tr/talLm1	53	1.23	1.00	1.52	0.128	80	1.19	0.96	1.52	0.103	2	0.45	0.22	0.67	0.318
tr/talLm3	50	1.19	0.95	1.76	0.159	80	1.13	0.88	1.97	0.164	2	0.69	0.68	0.70	0.014
talW/m1L	50	0.61	0.52	0.69	0.037	80	0.61	0.49	0.70	0.036	2	0.62	0.51	0.73	0.156
talW/m2L	50	0.67	0.57	0.75	0.042	80	0.66	0.43	0.77	0.048	2	0.57	0.50	0.64	0.099
talW/m3L	47	0.47	0.33	0.62	0.071	80	0.45	0.36	0.58	0.045	2	0.55	0.46	0.63	0.120
talWm3/talWm1	50	0.55	0.38	0.72	0.076	80	0.54	0.41	0.67	0.059	2	2.73	1.83	3.63	1.273
pL/m1L	50	0.58	0.49	0.78	0.053	80	0.60	0.53	0.68	0.034	2	2.75	2.72	2.77	0.035
pL/m3L	49	0.81	0.67	1.05	0.076	80	0.82	0.69	0.94	0.054	2	1.47	1.28	1.65	0.262
CrH/m13	49	1.11	0.94	1.31	0.065	77	1.02	0.42	1.44	0.091	2	1.87	1.61	2.13	0.368
RM1/CrH	1	1.09	1.09	1.09	0.000	77	1.00	0.86	2.39	0.165	2	0.97	0.93	1.00	0.049
Cd12/CrH	48	0.52	0.46	0.57	0.028	77	0.51	0.00	1.26	0.109	2	0.45	0.23	0.67	0.311
Cd45/CrH	49	0.40	0.33	0.47	0.026	77	0.38	0.33	0.96	0.069	2	0.48	0.42	0.54	0.085
cd1cd10/cd45	54	0.64	0.51	0.84	0.076	80	0.62	0.52	0.75	0.052	2	0.53	0.40	0.66	0.184
l1_1	41	1.50	1.25	1.68	0.113	18	1.22	1.06	1.39	0.083	2	1.43	1.30	1.56	0.184
l1pigm	41	0.95	0.24	1.27	0.237	18	0.84	0.20	1.21	0.266	2	0.71	0.46	0.95	0.346
Hl1pigm	47	0.82	0.13	1.22	0.255	19	0.83	0.23	1.78	0.343	2	0.70	0.47	0.92	0.318
i1RPigm	50	1.36	0.59	2.16	0.330	77	1.26	0.43	4.17	0.409	2	1.26	1.14	1.38	0.170
pigmPH1	48	0.46	0.16	0.73	0.123	79	0.44	0.33	0.53	0.047	2	0.35	0.26	0.44	0.127
pigmPH2	43	0.37	0.24	0.57	0.061	78	0.29	0.18	0.38	0.042	2	0.33	0.27	0.38	0.078
PigmTalm1	47	0.13	0.03	0.40	0.061	77	0.11	0.03	0.19	0.039	2	0.21	0.19	0.22	0.021
PigmTalm2	42	0.12	0.02	0.32	0.051	75	0.11	0.01	0.86	0.095	2	0.15	0.14	0.16	0.014
HPigmTrm1	47	0.58	0.15	0.91	0.170	79	0.52	0.16	1.01	0.129	2	0.57	0.53	0.60	0.049
HpigmTalm1	46	0.39	0.04	0.72	0.151	78	0.37	0.07	0.77	0.116	2	0.47	0.45	0.48	0.021
HpigmTrm2	45	0.45	0.09	0.74	0.154	78	0.42	0.09	0.90	0.135	2	0.53	0.50	0.55	0.035
HpigmTalm2	39	0.31	0.13	0.54	0.107	76	0.30	0.04	0.82	0.121	2	0.41	0.37	0.45	0.057
HpigmTrm3	39	0.28	0.08	0.53	0.112	71	0.29	0.03	0.62	0.097	2	0.38	0.37	0.38	0.007



**SF IIB: Statistics of biometrical data in fossil OTUs: B – dental (mandibular unicuspid, mandibular molars) variables, proportions and pigmentation**

	<i>Asoriculus</i>					<i>Neomys</i>									
	MN15-17					Q1					Q2				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
i1Lx	1	1.32	1.32	1.32	0.000						6	2.48	2.34	2.71	0.141
i1L	1	3.32	3.32	3.32	0.000						6	4.51	4.26	5.37	0.428
i1Lprim	1	0.96	0.96	0.96	0.000						6	1.81	1.54	2.06	0.177
i1Lsek	1	0.36	0.36	0.36	0.000						6	0.43	0.26	0.64	0.146
z1L	1	1.13	1.13	1.13	0.000										
pL	2	0.81	0.77	0.85	0.057						4	1.09	0.78	1.30	0.251
i1Le	1	2.05	2.05	2.05	0.000						6	2.34	2.03	3.01	0.368
i1H1	1	0.90	0.90	0.90	0.000						6	0.89	0.68	1.15	0.152
i1H2	1	0.94	0.94	0.94	0.000						6	0.88	0.71	1.16	0.151
z1H1	1	0.41	0.41	0.41	0.000										
z1H2	1	0.47	0.47	0.47	0.000										
pH	1	0.82	0.82	0.82	0.000						3	0.90	0.83	1.01	0.099
Hcingz1	1	0.11	0.11	0.11	0.000										
Hcingp	2	0.18	0.18	0.18	0.000						3	0.19	0.18	0.20	0.012
i1L (occ)	1	1.70	1.70	1.70	0.000						1	3.12	3.12	3.12	
z1L (occ)	1	0.58	0.58	0.58	0.000										
pL (occ)	2	0.80	0.75	0.84	0.064						3	1.05	1.00	1.11	0.057
z1W (occ)	1	0.65	0.65	0.65	0.000										
pW (occ)	2	0.77	0.64	0.90	0.184						3	0.71	0.68	0.74	0.031
m1L	4	1.51	1.44	1.60	0.075						10	1.62	1.43	1.71	0.080
m2L	3	1.33	1.28	1.39	0.055	1	1.39	1.39	1.39		4	1.40	1.16	1.49	0.157
m3L	3	1.04	0.99	1.11	0.061	1	0.93	0.93	0.93		2	1.16	1.15	1.16	0.007
HCingm1	3	0.14	0.13	0.15	0.010						7	0.74	0.65	0.84	0.064
HCingm2	2	0.14	0.11	0.16	0.035	1	0.80	0.80	0.80		4	0.73	0.66	0.78	0.055
HCingm3	1	0.14	0.14	0.14	0.000	1	0.57	0.57	0.57		3	0.59	0.56	0.63	0.038
HTrm1	3	1.16	1.01	1.26	0.134						10	1.10	0.81	1.42	0.214
HTal1	3	0.90	0.79	1.01	0.110						9	0.95	0.69	1.18	0.158
HTrm2	2	0.98	0.89	1.06	0.120	1	0.97	0.97	0.97		5	1.08	0.85	1.21	0.144
HTal2	2	0.74	0.71	0.76	0.035	1	0.79	0.79	0.79		5	0.81	0.60	0.94	0.139
HTrm3	2	0.71	0.64	0.78	0.099	1	0.71	0.71	0.71		2	0.93	0.88	0.97	0.064
HTal3	1	0.37	0.37	0.37	0.000	1	0.43	0.43	0.43		2	0.56	0.51	0.61	0.071
TrLm1	4	0.88	0.82	0.98	0.076						8	0.91	0.75	1.00	0.084
TalLm1	4	0.62	0.54	0.76	0.100						8	0.65	0.53	0.79	0.093
TrWm1	4	0.78	0.69	0.89	0.090						8	0.74	0.68	0.81	0.056
TalWm1	4	0.89	0.81	0.98	0.071						8	0.88	0.78	0.95	0.057
TrLm2	3	0.80	0.75	0.88	0.068	1	0.64	0.64	0.64		5	0.74	0.59	0.82	0.086
TalLm2	3	0.50	0.45	0.53	0.042	1	0.66	0.66	0.66		5	0.67	0.60	0.77	0.067
TrWm2	3	0.80	0.72	0.91	0.098	1	0.77	0.77	0.77		5	0.73	0.67	0.77	0.038
TalWm2	3	0.84	0.76	0.94	0.091	1	0.83	0.83	0.83		5	0.82	0.75	0.93	0.069
TrLm3	3	0.64	0.61	0.67	0.031	1	0.52	0.52	0.52		3	0.58	0.47	0.65	0.095
TalLm3	3	0.39	0.34	0.43	0.047	1	0.54	0.54	0.54		3	0.55	0.48	0.63	0.075
TrWm3	3	0.65	0.57	0.77	0.108	1	0.58	0.58	0.58		3	0.56	0.50	0.59	0.052
TalWm3	3	0.47	0.31	0.67	0.182	1	0.37	0.37	0.37		3	0.47	0.42	0.51	0.045
Wm1Tal	2	0.60	0.58	0.62	0.028						6	0.61	0.55	0.71	0.056
Wm2Tal	2	0.52	0.49	0.55	0.042	1	0.66	0.66	0.66		5	0.55	0.46	0.64	0.066
m1L (occ)	4	1.51	1.44	1.60	0.075						7	1.53	1.34	1.64	0.116
m2L (occ)	3	1.33	1.28	1.39	0.055	1	1.30	1.30	1.30		4	1.37	1.15	1.52	0.155
m3L (occ)	3	1.04	0.99	1.11	0.061	1	1.02	1.02	1.02		3	1.20	1.08	1.30	0.111
m1W (occ)	4	0.69	0.53	0.81	0.118						7	0.74	0.65	0.84	0.064
m2W (occ)	3	0.72	0.54	0.86	0.163	1	0.80	0.80	0.80		4	0.73	0.66	0.78	0.055
m3W (occ)	3	0.63	0.52	0.73	0.106	1	0.57	0.57	0.57		3	0.59	0.56	0.63	0.038
P4L/M2L											1	1.19	1.19	1.19	0.000
Lzp/m1m3	1	0.44	0.44	0.44	0.000										
m1/m13	3	0.39	0.38	0.40	0.012						2	0.39	0.39	0.39	0.001
m2/m13	3	0.34	0.34	0.35	0.006						2	0.33	0.33	0.34	0.005
m3/m13	3	0.27	0.26	0.28	0.010						2	0.27	0.26	0.29	0.018
tr/talLm1	4	1.46	1.08	1.81	0.312						8	1.43	1.10	1.85	0.283
tr/talLm3	3	1.63	1.54	1.79	0.139	1	0.96	0.96	0.96		3	1.07	0.75	1.27	0.286
talW/m1L	4	0.59	0.56	0.61	0.021						7	0.58	0.51	0.64	0.042
talW/m2L	3	0.63	0.59	0.68	0.046	1	0.64	0.64	0.64		4	0.61	0.58	0.65	0.031
talW/m3L	3	0.45	0.31	0.60	0.146	1	0.36	0.36	0.36		3	0.39	0.39	0.39	0.004
talWm3/talWm1	3	0.51	0.36	0.68	0.161						2	0.52	0.51	0.53	0.011
pL/m1L	2	0.51	0.49	0.53	0.028						3	0.68	0.62	0.73	0.056
pL/m3L	2	0.75	0.73	0.76	0.021										
CrH/m13	3	1.02	0.97	1.04	0.040						2	0.99	0.98	1.00	0.009
RM1/CrH	7	0.89	0.84	0.96	0.046	1	0.90	0.90	0.90		10	0.95	0.88	1.04	0.041
Cd12/CrH	7	0.46	0.42	0.50	0.024	1	0.45	0.45	0.45		10	0.50	0.47	0.54	0.023
Cd45/CrH	7	0.39	0.34	0.43	0.033	1	0.39	0.39	0.39		11	0.38	0.35	0.43	0.021
cd1cd10/cd45	9	0.49	0.34	0.60	0.087						10	0.57	0.44	0.65	0.062
i1RPigm	1	0.36	0.36	0.36	0.000	2	0.44	0.43	0.45	0.017	4	1.42	0.84	1.75	0.397
pigmPH1											3	0.39	0.34	0.48	0.078
pigmPH2											3	0.33	0.22	0.41	0.097
PigmTalm1											4	0.11	0.06	0.17	0.046
PigmTalm2											1	0.14	0.14	0.14	0.000
HPigmTrm1	2	0.33	0.28	0.38	0.071						8	0.38	0.14	0.52	0.134
HPigmTalm1	2	0.16	0.09	0.23	0.099						7	0.31	0.15	0.44	0.104
HPigmTrm2	1	0.19	0.19	0.19	0.000	1	0.29	0.29	0.29		5	0.41	0.32	0.57	0.097
HPigmTalm2											3	0.31	0.21	0.39	0.092
HPigmTrm3											2	0.25	0.22	0.27	0.035

**SF IIB: Statistics of biometrical data in fossil OTUs: C – mandibular and dental  
(maxillary unicuspid, maxillary molars) variables of Q4 *Neomys***

	<i>Q4 Neomys fodiens</i>					<i>Q4 Neomys milleri</i>					<i>Q4 all</i>				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
Cr1	10	0.63	0.45	0.79	0.037	8	0.30	0.77	0.57	0.048	31	0.63	0.30	0.93	0.157
Cr2	10	0.84	0.55	0.96	0.040	8	0.40	0.87	0.74	0.054	31	0.82	0.40	1.12	0.168
Cr3	10	1.10	0.87	1.30	0.041	8	0.81	1.28	1.09	0.053	31	1.10	0.81	1.46	0.160
Cr4	10	1.21	1.03	1.43	0.032	8	0.78	1.34	1.09	0.059	31	1.18	0.78	1.45	0.138
Cr5	10	0.70	0.55	0.79	0.027	8	0.52	1.08	0.76	0.075	30	0.74	0.50	1.08	0.162
CdL (lat)	10	1.29	1.08	1.50	0.042	11	1.02	1.34	1.21	0.035	35	1.26	1.02	1.52	0.124
CdH1	10	1.69	1.38	1.88	0.041	11	1.36	1.77	1.54	0.036	35	1.60	1.31	1.89	0.159
CdH2	10	1.37	1.19	1.74	0.049	11	1.15	1.45	1.28	0.031	35	1.33	1.10	1.74	0.154
AngL	1	1.31	1.31	1.31	0.000	1	1.07	1.07	1.07	0.000	4	1.63	1.07	2.37	0.571
RmL	10	2.26	2.11	2.78	0.064	11	1.79	2.20	2.01	0.035	34	2.12	1.71	2.78	0.192
CorH	10	4.59	4.22	4.79	0.046	8	3.93	4.44	4.25	0.059	30	4.39	3.93	4.79	0.239
FM	8	5.56	4.96	6.19	0.121	6	5.08	5.55	5.29	0.074	20	5.39	4.92	6.19	0.287
Lz1-m3	1	6.66	6.66	6.66	0.000						1	6.66	6.66	6.66	0.000
Hmd	9	1.54	1.45	1.66	0.021	14	1.14	1.60	1.37	0.033	39	1.43	1.14	1.66	0.130
Lzp	2	2.34	2.31	2.36	0.025	1	1.97	1.97	1.97	0.000	3	2.21	1.97	2.36	0.212
m1m3	1	4.59	4.59	4.59	0.000	2	3.79	4.47	4.13	0.340	5	4.36	3.79	4.59	0.327
CdL(ling)	9	1.36	1.18	1.43	0.025	11	0.91	1.35	1.15	0.044	34	1.31	0.91	3.01	0.332
CdH	9	3.65	3.52	3.83	0.034	11	2.44	3.69	3.19	0.105	33	3.43	1.56	4.42	0.481
RM1	9	4.46	4.22	4.70	0.048	11	3.71	4.32	3.98	0.059	32	4.23	3.24	4.70	0.315
RM2	9	3.26	2.98	3.43	0.048	11	2.87	3.15	3.02	0.027	32	3.13	1.97	3.43	0.266
RM3	9	2.40	1.97	2.55	0.064	11	1.89	3.15	2.27	0.098	33	2.39	1.89	3.26	0.277
CrH1	9	4.55	4.29	4.66	0.038	8	3.89	4.42	4.23	0.064	29	4.36	3.89	4.66	0.233
CrH2	9	4.50	4.30	4.67	0.044	8	3.93	4.46	4.19	0.063	28	4.32	3.91	4.67	0.236
CrH3	9	2.73	2.50	3.01	0.050	10	2.24	2.82	2.47	0.052	32	2.60	2.14	3.01	0.198
CrH4	9	3.93	3.67	4.18	0.049	8	3.28	3.66	3.53	0.046	28	3.75	3.28	4.18	0.247
CrH5	9	3.61	3.28	3.96	0.064	8	3.13	3.45	3.30	0.041	27	3.47	3.13	3.96	0.231
CrH6	9	3.09	2.71	3.31	0.064	10	2.55	3.04	2.83	0.045	31	3.01	2.55	3.35	0.210
mdL1	2	11.52	11.10	11.94	0.420	1	10.23	10.23	10.23	0.000	3	11.09	10.23	11.94	0.855
mdL2	2	10.53	10.16	10.89	0.365	1	9.37	9.37	9.37	0.000	3	10.14	9.37	10.89	0.760
mdL3	2	10.15	9.77	10.52	0.375	1	9.04	9.04	9.04	0.000	3	9.78	9.04	10.52	0.740
mdL4	2	7.20	6.80	7.59	0.395	1	6.50	6.50	6.50	0.000	3	6.96	6.50	7.59	0.563
mdL5	2	9.05	8.74	9.35	0.305	1	8.14	8.14	8.14	0.000	3	8.74	8.14	9.35	0.605
mdL1m1	7	8.92	8.67	9.23	0.077	7	7.99	8.83	8.38	0.098	19	8.68	7.99	9.23	0.318
mdL2m1	7	8.01	7.80	8.28	0.062	7	7.30	8.09	7.72	0.093	19	7.86	7.30	8.28	0.229
mdL3m1	7	7.57	7.32	7.85	0.066	7	6.92	7.61	7.27	0.096	20	7.41	6.92	7.85	0.253
mdL4m1	7	4.78	4.66	5.00	0.043	7	4.37	5.08	4.83	0.085	20	4.81	4.37	5.08	0.157
mdL5m1	7	6.62	6.28	6.92	0.085	7	6.08	6.70	6.54	0.085	20	6.57	6.08	6.92	0.203
mdL1m2	2	7.45	7.43	7.47	0.020	5	6.58	7.14	6.87	0.089	10	7.11	6.58	7.49	0.306
mdL2m2	2	6.38	6.28	6.48	0.100	5	5.86	6.31	6.12	0.084	10	6.27	5.86	6.59	0.219
mdL3m2	2	6.08	6.05	6.11	0.030	5	5.48	6.01	5.77	0.089	11	5.89	5.48	6.15	0.201
mdL4m2	2	3.29	3.14	3.43	0.145	5	3.10	3.40	3.27	0.058	11	3.44	3.10	5.11	0.566
mdL5m2	2	5.22	5.21	5.23	0.010	5	4.77	5.32	5.01	0.089	11	4.86	3.18	5.32	0.583
mdL1m3	1	6.00	6.00	6.00	0.000	1	5.45	5.45	5.45	0.000	4	5.70	5.45	6.00	0.235
mdL2m3	1	4.89	4.89	4.89	0.000	1	4.85	4.85	4.85	0.000	4	4.83	4.76	4.89	0.054
mdL3m3	1	4.62	4.62	4.62	0.000	1	4.55	4.55	4.55	0.000	4	4.52	4.44	4.62	0.086
mdL4m3	1	1.54	1.54	1.54	0.000	1	2.04	2.04	2.04	0.000	4	1.66	1.40	2.04	0.275
mdL5m3	1	3.51	3.51	3.51	0.000	1	3.88	3.88	3.88	0.000	4	3.58	3.22	3.88	0.282
symfL	2	2.34	2.06	2.61	0.275	1	1.89	1.89	1.89	0.000	4	1.99	1.41	2.61	0.495
symfW	4	0.41	0.37	0.44	0.015	2	0.26	0.28	0.27	0.010	9	0.39	0.26	0.51	0.077
CrW1	8	0.76	0.52	0.93	0.046	8	0.39	0.70	0.57	0.043	27	0.70	0.34	0.99	0.170
CrW2	8	0.96	0.86	1.08	0.028	8	0.51	0.94	0.75	0.054	27	0.87	0.51	1.12	0.141
fpL	7	1.02	0.96	1.09	0.016	11	0.89	1.19	1.00	0.029	31	1.02	0.89	1.22	0.079
fpH	7	0.91	0.76	1.08	0.048	11	0.62	0.97	0.84	0.035	30	0.87	0.39	1.16	0.149
mdH1	8	1.67	1.54	1.83	0.033	13	1.29	1.83	1.51	0.042	31	1.59	1.29	1.86	0.138
mdH2	8	1.52	1.33	1.61	0.034	14	1.26	1.67	1.46	0.037	36	1.49	1.26	1.73	0.117
mdH3	9	1.44	1.06	1.65	0.061	13	1.22	1.59	1.40	0.031	38	1.43	1.06	1.70	0.143
Cd1Cd2	9	2.34	2.07	2.47	0.037	11	1.86	2.20	2.06	0.036	32	2.22	1.86	2.47	0.165
Cd1Cd3	9	2.07	1.85	2.23	0.036	11	1.69	1.96	1.83	0.027	32	1.95	1.69	2.23	0.135
Cd1Cd10	9	0.98	0.46	1.22	0.073	11	0.28	0.97	0.72	0.076	32	0.91	0.28	1.22	0.239
Cd4Cd5	9	1.80	1.60	1.94	0.035	11	1.35	1.85	1.61	0.050	33	1.72	1.35	1.94	0.147
Cd6Cd7	9	0.68	0.53	0.79	0.029	11	0.52	0.71	0.63	0.021	33	0.66	0.52	0.79	0.076
Cd8Cd9	9	0.47	0.35	0.59	0.031	11	0.26	0.56	0.48	0.027	33	0.48	0.26	0.64	0.089
LZ2	2	1.11	1.02	1.2	0.090						2	1.11	1.02	1.20	0.127
LZ3	2	0.92	0.88	0.96	0.040						2	0.92	0.88	0.96	0.057
LZ4															
WZ2	1	1.24	1.24	1.24	0.000						1	1.24	1.24	1.24	0.000
WZ3	1	1.04	1.04	1.04	0.000						1	1.04	1.04	1.04	0.000
WP4															
WM1	1	1.53	1.53	1.53	0.000						1	1.53	1.53	1.53	0.000
WM2	1	1.43	1.43	1.43	0.000						1	1.43	1.43	1.43	0.000
WM3	1	0.74	0.74	0.74	0.000						1	0.74	0.74	0.74	0.000
LP4															
LM1	5	1.76	1.69	1.83	0.031						5	1.76	1.69	1.83	0.070
LM2	5	1.526	1.47	1.58	0.018						5	1.53	1.47	1.58	0.040
LM3	1	0.83	0.83	0.83	0.000						1	0.83	0.83	0.83	0.000
P4W1															
P4W1x															
P4W2x															
P4Wdi															
P4W2															
P4Lc															
P4Lx															
M1W1	4	1.91	1.77	2.16	0.091						4	1.91	1.77	2.16	0.182
M2W1	5	1.88	1.74	1.98	0.044						5	1.88	1.74	1.98	0.098
M1W2	5	2.11	1.88	2.28	0.066						5	2.11	1.88	2.28	0.148
M2W2	5	1.86	1.78	1.93	0.027						5	1.86	1.78	1.93	0.060
M1W1x	4	1.65	1.49	1.88	0.083						4	1.65	1.49	1.88	0.167
M2W1x	5	1.57	1.49	1.73	0.045						5	1.57	1.49	1.73	0.100
M1W2x	4	2.47	2.36	2.53	0.039						4	2.47	2.36	2.53	0.078
M2W2x	5	2.27	2.16	2.38	0.043						5	2.27	2.16	2.38	0.097
M1Lx	5	1.46	1.40	1.52	0.021						5	1.46	1.40	1.52	0.046
M2Lx	5	1.37	1.33	1.39	0.012						5	1.37	1.33	1.39	0.027
M1PaL	4	0.75	0.73	0.81	0.019										



**SF IIb: Statistics of biometrical data in fossil OTUs: D – dental (mandibular unicuspid, mandibular molars) variables, proportions and pigmentation of Q4 *Neomys***

	<i>Neomys</i>														
	Q4 <i>Neomys fodiens</i>				Q4 <i>Neomys milleri</i>				Q4 all						
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
i1Lx	7	2.45	2.20	2.93	0.095						9	2.51	2.20	2.93	0.258
i1L	7	4.67	4.43	4.97	0.083						9	4.61	4.17	4.97	0.251
i1Lprim	7	1.92	1.80	2.04	0.033						9	1.87	1.41	2.04	0.187
i1Lsek	7	0.45	0.38	0.68	0.040						9	0.47	0.31	0.82	0.165
z1L	2	1.46	1.36	1.55	0.095	1	1.13	1.13	1.13	0.000	5	1.32	1.07	1.55	0.211
pL	5	1.18	1.11	1.40	0.054	5	0.98	1.28	1.18	0.055	13	1.15	0.83	1.40	0.157
i1Lc	7	2.39	2.20	2.81	0.084						9	2.35	2.08	2.81	0.218
i1H1	8	0.98	0.84	1.09	0.026						10	0.96	0.84	1.09	0.075
i1H2	8	0.90	0.80	1.01	0.022						10	0.90	0.80	1.01	0.056
z1H1	2	0.67	0.66	0.67	0.005	1	0.39	0.39	0.39	0.000	4	0.62	0.39	0.77	0.163
z1H2	2	0.58	0.53	0.63	0.050	1	0.53	0.53	0.53	0.000	4	0.55	0.50	0.63	0.057
pH	5	0.89	0.81	1.04	0.040	3	0.75	0.92	0.82	0.050	10	0.88	0.75	1.09	0.109
Hcingz1	2	0.23	0.23	0.23	0.000	1	0.15	0.15	0.15	0.000	4	0.20	0.15	0.23	0.038
Hcingp	5	0.23	0.17	0.28	0.023	3	0.12	0.21	0.15	0.028	10	0.20	0.12	0.28	0.054
i1L (occ)	2	2.84	2.68	2.99	0.155	1	3.94	3.94	3.94	0.000	4	3.19	2.68	3.94	0.537
z1L (occ)	2	1.01	0.97	1.05	0.040	1	0.77	0.77	0.77	0.000	5	0.89	0.65	1.05	0.169
pL (occ)	5	1.09	0.88	1.24	0.061	5	0.90	1.04	0.97	0.027	13	1.03	0.88	1.24	0.103
z1W (occ)	2	0.70	0.69	0.70	0.005	1	0.65	0.65	0.65	0.000	5	0.68	0.64	0.72	0.034
pW (occ)	5	0.83	0.79	0.87	0.016	5	0.65	0.83	0.73	0.029	13	0.78	0.65	0.87	0.068
m1L	7	1.86	1.74	1.94	0.029	10	1.43	1.86	1.68	0.036	30	1.77	1.43	1.97	0.121
m2L	4	1.55	1.42	1.66	0.053	9	1.21	1.64	1.45	0.054	22	1.52	1.21	1.70	0.136
m3L	1	1.12	1.12	1.12	0.000	3	0.96	1.24	1.08	0.084	8	1.16	0.96	1.28	0.116
HCingm1	8	0.22	0.16	0.31	0.019	10	0.14	0.30	0.21	0.020	31	0.90	0.64	1.13	0.122
HCingm2	3	0.21	0.18	0.25	0.021	9	0.13	0.23	0.18	0.012	20	0.88	0.71	1.16	0.116
HCingm3	1	0.16	0.16	0.16	0.000	3	0.10	0.19	0.14	0.026	8	0.67	0.56	0.77	0.072
HTrm1	8	1.32	1.13	1.51	0.048	11	0.20	1.41	1.11	0.098	30	1.25	0.20	1.51	0.251
HTal1	8	1.00	0.27	1.49	0.123	10	0.66	1.08	0.96	0.038	28	1.01	0.27	1.49	0.219
HTrm2	3	1.23	1.18	1.26	0.024	9	0.76	1.21	1.04	0.045	20	1.13	0.76	1.34	0.153
HTal2	3	0.93	0.90	0.97	0.022	9	0.52	0.94	0.79	0.046	20	0.85	0.52	1.02	0.144
HTrm3	1	0.89	0.89	0.89	0.000	3	0.66	0.77	0.71	0.033	8	0.82	0.66	0.94	0.107
HTal3	1	0.51	0.51	0.51	0.000	3	0.43	0.50	0.46	0.021	8	0.50	0.43	0.56	0.040
TrLm1	8	1.05	0.93	1.18	0.026	10	0.82	1.06	0.93	0.022	30	0.97	0.65	1.18	0.111
TalLm1	8	0.71	0.65	0.78	0.018	10	0.61	0.84	0.73	0.024	30	0.74	0.61	0.99	0.088
TrWm1	8	0.84	0.65	0.99	0.038	10	0.59	0.92	0.80	0.038	31	0.81	0.59	1.15	0.127
TalWm1	8	1.02	0.92	1.15	0.025	10	0.66	1.08	0.95	0.041	31	0.96	0.66	1.15	0.112
TrLm2	3	0.84	0.79	0.87	0.025	9	0.70	0.88	0.80	0.023	21	0.82	0.70	1.02	0.073
TalLm2	3	0.66	0.61	0.68	0.023	9	0.51	0.75	0.62	0.026	21	0.68	0.51	1.06	0.122
TrWm2	3	0.89	0.75	0.98	0.072	9	0.55	0.91	0.76	0.042	21	0.81	0.55	0.99	0.119
TalWm2	3	1.00	0.90	1.06	0.052	9	0.67	1.00	0.87	0.041	21	0.89	0.67	1.06	0.122
TrLm3	1	0.71	0.71	0.71	0.000	3	0.58	0.70	0.62	0.040	10	0.69	0.56	1.00	0.125
TalLm3	1	0.47	0.47	0.47	0.000	3	0.46	0.53	0.49	0.020	9	0.55	0.43	0.99	0.169
TrWm3	1	0.63	0.63	0.63	0.000	3	0.48	0.74	0.58	0.082	9	0.60	0.38	0.74	0.118
TalWm3	1	0.42	0.42	0.42	0.000	3	0.32	0.63	0.43	0.100	8	0.48	0.32	0.63	0.110
Wm1Tal	4	0.64	0.16	1.03	0.181	7	0.61	0.95	0.75	0.050	22	0.71	0.16	1.03	0.170
Wm2Tal	2	0.79	0.76	0.82	0.030	3	0.55	0.64	0.59	0.026	9	0.67	0.55	0.82	0.091
m1L (occ)	8	1.75	1.69	1.83	0.016	10	1.43	1.79	1.64	0.035	31	1.70	1.43	1.87	0.110
m2L (occ)	3	1.50	1.47	1.55	0.027	10	1.26	1.59	1.42	0.038	21	1.46	1.26	1.61	0.109
m3L (occ)	1	1.18	1.18	1.18	0.000	4	1.04	1.23	1.10	0.045	9	1.15	1.04	1.23	0.080
m1W (occ)	8	0.99	0.76	1.13	0.045	10	0.64	1.07	0.84	0.036	31	0.90	0.64	1.13	0.122
m2W (occ)	3	1.07	0.99	1.16	0.049	9	0.71	0.94	0.81	0.022	20	0.88	0.71	1.16	0.116
m3W (occ)	1	0.77	0.77	0.77	0.000	3	0.56	0.66	0.61	0.029	8	0.67	0.56	0.77	0.072
P4L/M2L															
Lzp/m1m3	1	0.51	0.51	0.51	0.000						1	0.51	0.51	0.51	0.000
m1/m13	1	0.37	0.37	0.37	0.000	2	0.38	0.38	0.38	0.000	5	0.38	0.37	0.38	1.183
m2/m13	1	0.32	0.32	0.32	0.000	2	0.35	0.34	0.36	4.041	5	0.34	0.32	0.36	4.388
m3/m13	1	0.26	0.26	0.26	0.000	2	0.28	0.28	0.28	0.000	5	0.27	0.26	0.28	3.076
tr/talLm1	9	1.37	0.74	1.82	0.290	10	1.297	1.15	1.48	9.827	30	1.32	0.72	1.82	17.971
tr/talLm3	1	1.51	1.51	1.51	0.000	3	1.25	1.18	1.32	5.604	9	1.31	1.01	1.70	15.207
talW/m1L	9	0.59	0.53	0.64	0.040	9	0.57	0.46	0.61	8.541	30	0.56	0.43	0.64	10.231
talW/m2L	2	0.65	0.61	0.68	0.049	9	0.62	0.53	0.71	7.962	19	0.60	0.47	0.71	10.088
talW/m3L	1	0.36	0.36	0.36	0.000	3	0.38	0.31	0.51	29.656	8	0.41	0.31	0.51	17.658
talWm3/talWm1	1	0.41	0.41	0.41	0.000	2	0.57	0.52	0.61	11.264	6	0.52	0.41	0.61	12.640
pL/m1L	4	0.61	0.51	0.7	0.078	5	0.47	0	0.61	56.197	11	0.55	0.00	0.70	34.591
pL/m3L	1	0.9	0.9	0.9	0.000						1	0.90	0.90	0.90	0.000
CrH/m13	1	1.04	1.04	1.04	0.000	1	0.94	0.94	0.94	0.000	3	1.01	0.94	1.05	6.023
RM1/CrH	10	0.96	0.92	1	0.023	8	0.94	0.9	0.99	3.234	28	0.97	0.79	1.13	6.569
Cd12/CrH	9	0.5	0.45	0.54	0.025	8	0.49	0.45	0.51	3.699	27	0.51	0.45	0.59	6.359
Cd45/CrH	10	0.39	0.34	0.43	0.026	8	0.38	0.31	0.44	11.127	28	0.39	0.31	0.49	9.575
cd1cd10/cd45	9	0.55	0.26	0.66	0.123	11	0.46	0.15	0.65	37.926	32	0.53	0.15	0.74	25.463
i1RPigm	7	1.40	0.47	2.18	0.191						9	1.40	0.47	2.18	0.449
pigmPH1	5	0.45	0.39	0.51	0.023	3	0.34	0.48	0.41	0.041	10	0.44	0.34	0.53	0.065
pigmPH2	5	0.32	0.26	0.39	0.021	3	0.14	0.32	0.26	0.060	10	0.31	0.14	0.39	0.069
PigmTalm1	6	0.17	0.10	0.24	0.022	9	0.08	0.29	0.19	0.029	25	0.17	0.05	0.35	0.080
PigmTalm2	2	0.19	0.18	0.20	0.010	8	0.04	0.26	0.16	0.034	18	0.15	0.04	0.27	0.077
HPigmTrm1	8	0.53	0.33	0.73	0.044	10	0.30	0.62	0.50	0.030	27	0.53	0.30	0.73	0.107
HpigmTalm1	7	0.39	0.27	0.46	0.024	10	0.20	0.55	0.37	0.033	25	0.39	0.18	0.55	0.095
HpigmTrm2	3	0.42	0.38	0.47	0.026	9	0.19	0.57	0.41	0.043	19	0.43	0.19	0.60	0.114
HpigmTalm2	3	0.32	0.29	0.37	0.027	9	0.09	0.41	0.28	0.037	19	0.29	0.09	0.41	0.091
HpigmTrm3	1	0.26	0.26	0.26	0.000	3	0.08	0.35	0.24	0.081	8	0.24	0.08	0.35	0.094

## SF IIc: Biometrical data of the extant Oriental species: A – cranial, rostral, mandibular and dental (maxillary unicusps) variables

	<i>Episorculus + Sorculus</i>														
	<i>Episorculus leucops</i>					<i>Episorculus caudatus</i>					<i>Sorculus nigrescens</i>				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
W1	4	2.74	2.61	2.81	0.09	5	2.32	2.21	2.40	0.07	5	2.74	2.57	2.91	0.15
W2	2	2.95	2.88	3.02	0.10	3	2.93	2.71	3.05	0.19	4	2.82	2.59	3.35	0.36
I1I1	1	1.99	1.99	1.99		1	1.62	1.62	1.62		4	2.26	2.06	2.36	0.14
Z1Z1	3	2.28	2.21	2.34	0.07	1	1.87	1.87	1.87		4	2.55	2.29	2.64	0.11
Z2Z2	3	2.56	2.41	2.64	0.13	2	2.04	2.04	2.04	0.00	4	2.89	2.71	3.04	0.14
Z3Z3	4	2.95	2.74	3.07	0.15	4	2.39	2.27	2.50	0.12	5	3.31	3.11	3.55	0.16
P4P4	5	4.85	4.41	5.08	0.26	5	4.00	3.88	4.14	0.10	5	5.55	5.27	5.75	0.19
M1M1	2	5.57	5.50	5.64	0.10	5	4.53	4.43	4.71	0.12	5	6.31	6.15	6.51	0.14
M2M2						5	4.63	4.52	4.85	0.14	5	6.08	5.83	6.31	0.21
M3M3						5	4.44	4.35	4.54	0.08	4	5.63	5.24	5.89	0.28
LpAl1	2	7.62	7.61	7.63	0.01	5	5.97	5.62	6.34	0.30	5	7.72	7.40	7.97	0.24
LpAl2	2	9.70	9.58	9.81	0.16	3	7.54	6.76	7.96	0.67	4	9.58	9.24	9.86	0.31
LpAl11	1	11.41	11.41	11.41		2	9.64	9.59	9.68	0.06	4	9.44	8.99	9.93	0.39
IP4	1	5.58	5.58	5.58		2	4.70	4.64	4.75	0.08	4	6.80	5.60	9.53	1.84
IM1	1	7.25	7.25	7.25		2	6.11	6.06	6.15	0.06	4	7.54	7.25	8.05	0.35
IM2						2	7.31	7.26	7.36	0.07	4	8.89	8.54	9.48	0.41
IM3						2	7.76	7.70	7.82	0.08	4	9.30	8.94	9.96	0.46
P4M1	5	3.44	3.38	3.54	0.06	5	2.84	2.72	2.94	0.08	5	3.79	3.63	3.99	0.16
P4M2	1	4.92	4.92	4.92		5	4.04	3.93	4.16	0.08	5	5.16	4.91	5.44	0.24
P4M3						5	4.54	4.39	4.67	0.10	5	5.68	5.42	6.00	0.27
M1M2	1	3.22	3.22	3.22		5	2.92	2.59	4.03	0.62	5	3.27	3.06	3.53	0.19
M1M3						5	3.28	3.23	3.31	0.03	5	4.03	3.85	4.37	0.23
M2M3						5	2.04	2.01	2.09	0.03	5	2.50	2.39	2.67	0.12
LUni						3	2.55	2.07	3.31	0.67	5	2.29	2.22	2.41	0.08
LMol						5	4.52	4.39	4.60	0.08	5	5.59	4.93	6.00	0.44
Cr1	3	1.16	1.08	1.25	0.09	4	0.55	0.41	0.80	0.18	9	1.56	0.65	1.97	0.41
Cr2	3	1.61	1.42	1.75	0.17	4	0.75	0.60	0.88	0.15	9	1.85	1.06	2.12	0.32
Cr3	3	1.94	1.77	2.06	0.15	4	1.04	0.86	1.11	0.12	9	2.22	1.56	2.71	0.31
Cr4	3	1.49	1.39	1.67	0.15	4	1.10	0.85	1.41	0.23	9	1.97	1.68	2.41	0.23
Cr5	3	1.00	0.84	1.11	0.14	4	0.74	0.64	0.87	0.10	9	1.26	1.02	1.51	0.15
CdL (lat)	4	1.32	1.22	1.43	0.10	4	1.02	0.90	1.13	0.11	10	1.33	1.13	1.50	0.11
CdH1	4	1.95	1.29	2.22	0.44	4	1.65	1.52	1.81	0.12	10	2.20	1.91	2.39	0.15
CdH2	4	1.70	1.55	2.10	0.27	4	1.18	1.10	1.28	0.07	10	1.69	1.38	1.90	0.17
AngL	3	2.33	1.52	2.76	0.70	1	1.80	1.80	1.80		9	2.46	2.16	2.75	0.18
RmL	4	2.72	2.63	2.76	0.06	4	2.10	1.98	2.21	0.11	10	3.08	2.14	5.76	0.98
CorH	6	4.70	4.48	4.90	0.16	11	3.72	3.54	4.03	0.16	10	5.60	5.29	5.83	0.15
FM	4	5.94	5.69	6.13	0.18	4	4.77	4.38	5.14	0.31	10	5.89	4.67	6.32	0.49
Lz1-m3	1	2.17	2.17	2.17		3	5.17	5.02	5.42	0.22	8	6.02	2.17	6.95	1.65
Hmd	4	1.65	1.54	1.80	0.12	4	1.22	1.18	1.31	0.06	10	1.72	1.23	1.85	0.19
Lzp						6	1.56	1.41	1.72	0.11	7	2.32	2.18	2.45	0.11
m1m3	5	4.40	4.25	4.52	0.12	10	3.81	3.46	4.12	0.18	10	4.75	4.64	4.90	0.10
CdL(ling)	4	1.33	1.22	1.47	0.10	4	1.15	0.97	1.25	0.13	10	1.36	1.17	1.53	0.11
CdH	4	3.99	3.91	4.05	0.07	4	3.14	3.06	3.19	0.06	10	4.22	3.51	4.52	0.28
RM1	6	4.93	4.63	5.11	0.18	11	3.90	3.71	4.15	0.16	10	5.22	4.99	5.47	0.16
RM2	6	3.64	3.45	3.96	0.19	11	2.80	2.63	3.02	0.12	10	3.71	3.36	4.00	0.21
RM3	4	2.87	2.63	2.96	0.16	4	2.41	2.32	2.49	0.07	10	3.31	2.39	5.62	0.85
CrH1	4	4.78	4.73	4.83	0.05	4	3.73	3.53	4.06	0.24	10	5.49	4.33	5.85	0.44
CrH2	4	4.58	4.55	4.61	0.03	4	3.63	3.42	3.93	0.24	10	4.80	3.28	5.38	0.72
CrH3	4	2.99	2.95	3.01	0.03	4	2.41	2.36	2.48	0.05	10	3.49	2.55	5.26	0.68
CrH4	4	4.54	4.32	4.65	0.16	4	3.33	2.86	3.57	0.32	10	5.07	4.25	5.52	0.42
CrH5	4	3.98	3.94	4.01	0.03	4	3.21	2.93	3.40	0.21	10	4.11	3.02	5.26	0.60
CrH6	4	3.65	3.57	3.71	0.06	4	2.96	2.91	3.04	0.06	10	3.86	3.22	4.08	0.24
mdl1	6	11.54	11.32	11.81	0.16	11	9.39	8.90	9.99	0.37	10	12.14	11.52	12.67	0.32
mdl2	6	10.45	10.27	10.63	0.13	11	8.49	8.01	9.05	0.36	10	10.89	10.42	11.49	0.30
mdl3	4	10.23	10.04	10.33	0.13	4	8.42	8.04	8.72	0.33	10	10.43	8.49	11.09	0.76
mdl4	6	6.89	6.75	6.98	0.09	11	5.70	5.21	6.13	0.28	10	7.10	6.79	7.41	0.25
mdl5	4	8.92	8.80	9.04	0.12	4	7.48	6.72	7.96	0.59	10	9.19	7.33	10.36	0.77
mdl1m1	4	9.50	9.36	9.60	0.10	4	7.80	7.45	8.13	0.37	10	9.73	7.90	10.20	0.67
mdl2m1	4	8.42	8.25	8.59	0.14	4	6.93	6.61	7.21	0.31	10	8.61	6.92	9.11	0.63
mdl3m1	4	8.14	7.97	8.28	0.13	4	6.69	6.41	6.90	0.24	10	8.39	6.79	8.88	0.60
mdl4m1	4	4.91	4.76	5.06	0.14	4	4.62	3.95	6.19	1.06	10	5.25	3.94	7.49	0.88
mdl5m1	4	7.05	6.98	7.12	0.06	4	5.49	4.25	6.26	0.87	10	7.03	5.00	7.67	0.89
mdl1m2	4	7.77	7.67	7.82	0.07	4	6.46	6.17	6.74	0.32	10	7.88	6.40	8.23	0.54
mdl2m2	4	6.64	6.48	6.76	0.12	4	5.55	5.31	5.77	0.26	10	6.91	5.39	8.72	0.80
mdl3m2	4	6.15	3.18	8.35	2.16	4	5.37	5.20	5.53	0.15	10	6.57	5.29	6.98	0.47
mdl4m2	4	3.91	2.81	6.34	1.63	4	2.78	2.64	3.00	0.17	10	3.14	2.35	3.44	0.33
mdl5m2	4	4.77	3.18	5.36	1.06	4	4.63	4.38	4.84	0.23	10	5.48	4.28	5.89	0.46
mdl1m3	2	6.42	6.41	6.42	0.01	4	5.26	4.96	5.55	0.30	10	6.39	5.21	6.66	0.43
mdl2m3	2	5.20	5.17	5.23	0.04	4	4.26	4.03	4.50	0.24	10	5.12	4.14	5.46	0.37
mdl3m3	2	5.09	5.06	5.12	0.04	4	4.17	4.06	4.28	0.11	10	4.94	4.10	5.37	0.43
mdl4m3	2	1.67	1.61	1.72	0.08	4	1.53	1.36	1.70	0.16	10	1.55	1.12	1.82	0.25
mdl5m3	2	3.95	3.83	4.06	0.16	4	3.33	3.04	3.58	0.23	10	3.94	3.02	4.34	0.35
symfL	4	2.08	1.72	2.33	0.26	2	2.25	2.08	2.42	0.24	9	2.63	2.24	3.23	0.30
symfW	4	0.34	0.30	0.43	0.06	4	0.29	0.26	0.32	0.03	10	0.34	0.23	0.42	0.06
CrW1	4	0.87	0.48	1.08	0.27	4	0.61	0.42	0.80	0.19	10	1.62	1.07	1.99	0.31
CrW2	4	1.07	0.63	1.28	0.30	4	0.77	0.66	0.88	0.12	10	1.56	1.36	1.82	0.14
fpL	4	1.37	1.31	1.44	0.06	4	1.04	0.82	1.17	0.16	10	1.25	0.94	1.91	0.25
fpH	4	1.06	1.02	1.10	0.05	4	0.82	0.80	0.83	0.01	10	1.12	0.87	1.31	0.12
mdH1	4	1.59	1.46	1.81	0.15	4	1.40	1.33	1.45	0.05	10	1.71	1.29	1.94	0.18
mdH2	4	1.68	1.51	1.96	0.20	4	1.29	1.24	1.32	0.04	10	1.72	1.27	1.90	0.18
mdH3	4	1.66	1.52	1.85	0.16	4	1.23	1.11	1.29	0.08	10	1.74	1.32	1.86	0.16
Cd1Cd2	10	2.71	2.07	3.09	0.26	11	2.14	2.05	2.33	0.08	10	3.10	2.93	3.27	0.11
Cd1Cd3	10	2.44	1.85	2.91	0.26	11	1.90	1.71	2.09	0.12	10	2.79	2.53	2.95	0.13
Cd1Cd10	10	0.93	0.30	1.19	0.25	11	0.83	0.75	0.91	0.05	10	1.12	0.94	1.23	0.09
Cd4Cd5	10	1.86	1.71	2.09	0.11	11	1.62	1.46	1.77	0.08	10	2.11	1.97	2.26	0.09
Cd6Cd7	10	0.61	0.56	0.67	0.04	11	0.51	0.46	0.59	0.04	10	0.69	0.63	0.74	0.04
Cd8Cd9	10	0.49	0.39	0.55	0.05	11	0.37	0.28	0.47	0.07	10	0.49	0.42	0.60	0.06
L11	1	1.41	1.41	1.41		2	1.12	1.12	1.12	0.00	3	1.49	1.45		

**SF IIc: Biometrical data of the extant Oriental species: B –dental (maxillary molariforms, mandibular unicuspid, mandibular molars) variables; proportions and pigmentation**

	<b>Episorculus + Sorculus</b>														
	<b>Episorculus leucops</b>					<b>Episorculus caudatus</b>					<b>Sorculus nigrescens</b>				
	n	avg	min	max	sd	n	avg	min	max	sd	n	avg	min	max	sd
WP4	3	1.35	1.29	1.40	0.06	3	0.99	0.97	1.01	0.02	5	1.45	1.31	1.54	0.11
WM1	3	1.50	1.48	1.52	0.02	2	1.29	1.22	1.36	0.10	5	1.72	1.58	1.84	0.10
WM2	1	1.41	1.41	1.41		2	1.27	1.22	1.32	0.07	5	1.51	1.47	1.54	0.03
WM3						1	0.84	0.84	0.84		4	0.88	0.77	0.99	0.10
LM1	5	1.67	1.60	1.78	0.07	5	1.38	1.35	1.43	0.04	5	1.79	1.69	1.95	0.10
LM2	1	1.48	1.48	1.48		5	1.28	1.25	1.32	0.03	5	1.51	1.42	1.68	0.11
LM3						5	0.65	0.57	0.69	0.05	5	0.66	0.58	0.81	0.09
P4W1	4	0.90	0.84	0.96	0.05	5	0.76	0.68	0.83	0.06	5	1.10	1.04	1.17	0.06
P4W1x	4	1.34	1.29	1.39	0.05	5	1.15	1.09	1.21	0.05	5	1.64	1.57	1.69	0.04
P4W2x	4	1.75	0.98	2.04	0.51	5	1.64	1.54	1.75	0.09	5	2.24	2.17	2.31	0.06
P4Wdi	4	1.19	0.91	1.81	0.42	4	0.81	0.73	0.87	0.06	3	1.01	0.97	1.05	0.04
P4W2	4	1.77	1.74	1.80	0.03	5	1.50	1.46	1.57	0.05	4	1.99	1.89	2.16	0.12
P4Lc	3	1.31	1.16	1.46	0.15	5	0.97	0.83	1.05	0.09	3	1.52	1.31	1.74	0.22
P4Lx	3	1.42	1.31	1.53	0.11	4	1.25	1.12	1.34	0.09	2	1.62	1.53	1.71	0.13
M1W1	4	1.48	1.46	1.51	0.02	5	1.36	1.29	1.43	0.06	5	1.79	1.63	1.98	0.14
M2W1	1	1.66	1.66	1.66		5	1.42	1.35	1.46	0.04	5	1.94	1.83	2.07	0.10
M1W2	4	1.73	1.67	1.78	0.05	5	1.49	1.44	1.55	0.05	5	2.00	1.76	2.28	0.19
M2W2	1	1.60	1.60	1.60		5	1.39	1.35	1.49	0.06	5	1.68	1.57	1.88	0.12
M1W1x	2	1.43	1.37	1.48	0.08	2	1.18	1.17	1.19	0.01	2	1.60	1.54	1.66	0.08
M2W1x						1	1.25	1.25	1.25		1	1.57	1.57	1.57	
M1W2x	4	2.17	2.13	2.25	0.05	5	1.90	1.73	2.09	0.13	5	2.46	2.37	2.56	0.08
M2W2x	1	2.01	2.01	2.01		5	1.80	1.70	1.90	0.07	5	2.29	2.20	2.37	0.07
M1Lx	1	1.36	1.36	1.36		5	1.22	1.20	1.27	0.03	5	1.53	1.48	1.63	0.06
M2Lx	1	1.28	1.28	1.28		5	1.09	1.07	1.14	0.03	5	1.30	1.24	1.35	0.04
M1PaL	4	0.74	0.67	0.76	0.04	5	0.71	0.68	0.77	0.04	5	0.90	0.80	0.94	0.06
M2PaL	1	0.69	0.69	0.69		5	0.65	0.61	0.74	0.05	5	0.82	0.76	0.88	0.05
M1MeL	4	0.93	0.90	0.96	0.03	5	0.68	0.61	0.72	0.05	5	0.91	0.82	0.98	0.06
M2MeL	1	0.79	0.79	0.79		5	0.61	0.56	0.68	0.06	5	0.70	0.62	0.80	0.07
M1PaC	4	0.83	0.74	0.88	0.06	5	0.85	0.83	0.89	0.03	5	1.05	0.98	1.15	0.07
M2PaC	1	0.78	0.78	0.78		5	0.86	0.75	1.02	0.11	5	0.88	0.78	0.97	0.07
M1MeC	4	1.11	1.04	1.19	0.06	5	0.90	0.78	0.96	0.08	5	1.25	1.16	1.29	0.05
M2MeC						5	0.91	0.86	0.98	0.05	5	0.94	0.79	1.03	0.09
M3W1	1	0.98	0.98	0.98		5	1.23	1.17	1.28	0.04	5	1.44	1.27	1.51	0.10
M3Lx						5	0.89	0.69	1.06	0.13	5	1.02	0.92	1.17	0.11
I1Lx	5	1.76	1.39	2.07	0.29	4	1.67	1.10	2.68	0.72	10	2.07	1.71	2.30	0.17
I1L	7	3.46	3.15	3.79	0.24	11	2.89	1.13	3.61	0.66	10	3.90	3.24	4.15	0.27
I1Lprim	5	1.17	0.93	1.40	0.18	4	0.84	0.73	1.05	0.15	10	1.30	0.78	1.57	0.23
I1Lsek	5	0.38	0.31	0.47	0.07	4	0.36	0.24	0.50	0.13	10	0.33	0.24	0.53	0.09
z1L	1	1.24	1.24	1.24		6	1.03	0.87	1.29	0.15	8	1.26	1.05	1.41	0.11
pL	3	1.12	0.92	1.34	0.21	9	0.72	0.59	0.90	0.10	9	1.12	0.91	1.33	0.14
I1Lc	5	1.93	1.38	2.20	0.32	4	1.93	1.74	2.20	0.20					
I1H1	5	0.91	0.61	1.08	0.19	4	0.70	0.61	0.78	0.07					
I1H2	5	0.90	0.79	0.99	0.09	4	0.76	0.73	0.80	0.03					
z1H1	1	0.53	0.53	0.53		3	0.48	0.40	0.60	0.10					
z1H2	1	0.57	0.57	0.57		3	0.48	0.38	0.58	0.10					
pH	2	0.64	0.52	0.75	0.16	4	0.72	0.36	1.10	0.30					
Hcingz1						2	0.14	0.10	0.17	0.05					
Hcingp						3	0.16	0.11	0.19	0.05					
I1L (occ)	6	2.50	2.24	2.90	0.26	11	1.80	1.31	2.41	0.38	10	2.18	1.74	2.74	0.27
z1L (occ)	1	0.69	0.69	0.69		7	0.62	0.44	0.72	0.09	9	0.80	0.65	1.13	0.16
pL (occ)	4	1.27	1.23	1.33	0.05	10	0.81	0.67	0.95	0.08	10	1.21	0.94	1.45	0.16
z1W (occ)	1	0.63	0.63	0.63		7	0.50	0.42	0.58	0.06	8	0.66	0.52	0.77	0.08
pW (occ)	4	0.79	0.76	0.82	0.03	10	0.58	0.47	0.70	0.07	10	0.84	0.69	0.94	0.06
m1L	7	1.77	1.56	1.88	0.11	11	1.51	1.37	1.66	0.09	10	1.99	1.73	2.16	0.14
m2L	7	1.48	1.39	1.58	0.07	11	1.31	1.24	1.40	0.05	10	1.60	1.51	1.69	0.06
m3L	5	1.12	1.03	1.22	0.09	10	1.04	0.88	1.14	0.09	10	1.14	1.03	1.37	0.10
HCingm1	7	0.96	0.84	1.01	0.06	11	0.86	0.82	0.95	0.05	10	1.14	1.01	1.26	0.08
HCingm2	7	0.90	0.75	0.99	0.08	11	0.84	0.78	0.94	0.06	10	1.06	0.96	1.12	0.06
HCingm3	5	0.67	0.56	0.72	0.06	10	0.66	0.61	0.72	0.03	9	0.76	0.65	0.87	0.06
HTrm1	4	1.07	0.56	1.33	0.35	4	0.81	0.67	0.98	0.15					
HTal1	4	0.77	0.36	0.93	0.27	4	0.57	0.43	0.74	0.14					
HTrm2	4	0.85	0.31	1.08	0.36	4	0.65	0.44	0.84	0.20					
HTal2	4	0.61	0.16	0.80	0.30	4	0.41	0.28	0.58	0.14					
HTrm3	2	0.43	0.20	0.66	0.33	4	0.45	0.30	0.64	0.16					
HTal3	1	0.42	0.42	0.42		3	0.24	0.17	0.35	0.10					
TrLm1	7	1.05	0.95	1.24	0.10	9	0.89	0.76	0.98	0.07	10	1.17	0.96	1.30	0.09
TalLm1	7	0.74	0.65	0.80	0.05	9	0.56	0.45	0.64	0.06	10	0.78	0.62	0.92	0.09
TrWm1	7	0.96	0.93	1.03	0.03	9	0.77	0.66	0.92	0.09	9	0.93	0.67	1.19	0.17
TalWm1	7	1.07	1.01	1.10	0.03	9	0.88	0.77	1.01	0.07	9	1.04	0.75	1.33	0.17
TrLm2	7	0.89	0.83	0.99	0.05	9	0.76	0.65	0.83	0.06	10	0.91	0.73	1.01	0.08
TalLm2	7	0.60	0.52	0.65	0.05	9	0.51	0.46	0.58	0.05	10	0.65	0.49	0.76	0.09
TrWm2	7	0.88	0.81	0.98	0.06	9	0.78	0.63	0.97	0.11	9	0.86	0.70	1.06	0.13
TalWm2	5	0.95	0.81	1.00	0.08	9	0.84	0.71	1.00	0.09	9	0.92	0.74	1.14	0.12
TrLm3	5	0.74	0.70	0.78	0.03	8	0.63	0.55	0.71	0.06	10	0.71	0.48	0.83	0.11
TalLm3	5	0.48	0.42	0.52	0.04	8	0.43	0.32	0.49	0.06	10	0.48	0.35	0.64	0.08
TrWm3	5	0.68	0.64	0.71	0.03	8	0.66	0.54	0.73	0.07	8	0.68	0.52	0.83	0.10
TalWm3	5	0.54	0.43	0.60	0.07	8	0.55	0.44	0.62	0.07	8	0.48	0.39	0.60	0.09
Wm1Tal						2	0.69	0.68	0.70	0.01	2	0.95	0.91	0.99	0.06
Wm2Tal						1	0.78	0.78	0.78		1	0.78	0.78	0.78	
m1 (occ)	7	1.77	1.66	1.86	0.06	11	1.43	1.26	1.50	0.07	10	1.95	1.86	2.06	0.07
m2L (occ)	7	1.50	1.45	1.58	0.04	11	1.26	1.13	1.34	0.06	10	1.60	1.52	1.68	0.05
m3L (occ)	5	1.23	1.13	1.29	0.06	10	1.06	0.90	1.17	0.08	10	1.22	1.00	1.36	0.11
m1W (occ)	7	0.96	0.84	1.01	0.06	11	0.86	0.82	0.95	0.05	10	1.14	1.01	1.26	0.08
m2W (occ)	7	0.90	0.75	0.99	0.08	11	0.84	0.78	0.94	0.06	10	1.06	0.96	1.12	0.06
m3W (occ)	5	0.67	0.56	0.72	0.06	10	0.66	0.61	0.72	0.03	9	0.76	0.65	0.87	0.06
LUni/Lmol						3	0.56	0.45	0.73	0.15	5	0.41	0.39	0.45	0.02
M1/M13						5	0.42	0.41	0.43	0.01	5	0.44	0.43	0.45	0.01
M2/M13						5	0.39	0.38	0.40	0.01	5	0.38	0.35	0.40	0.02
M3/M13						5	0.20	0.17	0.21	0.02	5	0.16	0.15	0.19	0.01
M3L/M1L						5	0.47	0.42	0.51	0.03	5	0.37	0.34	0.42	0.03
M22/M13						5	1.41	1.37	1.47	0.04	5	1.51	1.38	1.62	0.09
M22/M3L						5	7.15	6.55	8.51	0.78					

## SF IId: Biometrical data of individual MN15-Q1 specimens

variable	category	MN15		MN16		MN17						Q1							
		Včeláre 2	Včeláre 2	Ivanovce	Javoričko XI	Včeláre 6/1	Koľňany 1	Včeláre 3	Včeláre 3	Včeláre 3	Včeláre 3	Včeláre 3	Včeláre 3/1	Včeláre 3/1	Včeláre 5	Včeláre 4E	Včeláre 4/7	Včeláre 6/7	
							AsorX	Asor1	Asor2	Asor3	Asor4	Asor5	Asor6						
Cr1	MD	0,66		0,73	0,58	0,46		0,76	0,7	0,83				0,66		0,41	1,01		0,8
Cr2	MD	0,8		0,99	0,68	0,64		1,05	0,94	0,88				0,84		0,91	1,29		1,04
Cr3	MD	1,3		1,54	1,16	1,16		1,25	1,49	1,15				1,15		1,22	1,51		1,45
Cr4	MD	1,18		1,28	1,31	1		1,03	1,28	0,83				1,37		0,96	1,15		1,23
Cr5	MD	0,84		0,87	0,96	0,46		0,55	0,54	0,53				0,82		0,82	0,84		0,97
CdL (lat)	MD	0,98		0,93	0,87	0,86	0,97	1,07	0,84	0,88	0,96					0,72	1,04		1,3
CdH1	MD	1,18		1,24	1	1,19	1,44	1,36	1,23	1,34	1,43					0,78	1,24		1,38
CdH2	MD	1,09		0,99	1,27	1,07	1,16	1,11	1,05	1,12	1,05					1,07	1,02		1,31
AngL	MD																		
RmL	MD	1,72		2,63	1,99	1,84		2,19	1,98	1,86	2,07	1,81	1,99			1,76			2,14
CorH	MD	3,9		4,14	3,74	3,68		3,98	3,96	3,79			4,12			4,1			4,32
FM	MD			5,13	4,56			4,24											4,87
Lz1-m3	MD				5,14														
Hmd	MD			1,42	1,32	0,93		1,26		1,18		1,12	0,99						1,41
Lzp	MD				1,7														
m1m3	MD			3,99	3,86			3,81											
CdL(ling)	MD	0,95		0,98	0,83	0,89	0,96	1,01	0,86	0,89						1,09			1,23
CdH	MD	2,87		2,96	2,56	2,9	2,12	3,03	2,89	2,74						3,14			3,25
RM1	MD	3,33		3,96	3,28	3,29	3,53	3,78	3,34	3,39	3,59					3,69			3,98
RM2	MD	1,85		3	2,84	2,7	2,6	2,91	2,72	2,63	2,72					2,92			3,17
RM3	MD	0,83		2,56	2,35	1,95	1,93	2,16	2,01	2,1	2,16		2,09			1,97			2,37
CrH1	MD	3,86		4,12	3,76	3,67		3,91	3,87	3,83			4,02			4,13			4,15
CrH2	MD	3,82		3,98	3,77	3,52		3,72	3,7	3,72			4,04			3,56			4,22
CrH3	MD	2,21		2,38	2,27	2,19		2,28	2,26	2,3			2,42			2,36			2,44
CrH4	MD	3,17		3,71	3,29	3,07		3,55	3,29	3,36			3,44			3,45			3,56
CrH5	MD	2,87		3,23	2,99	2,82		3,01	2,86	2,86			3,09			2,58			3,19
CrH6	MD	2,35		2,91	2,63	2,43		2,77	2,51	2,55			2,68			2,59			2,79
mdL1	MD				8,59														
mdL2	MD				8,3														
mdL3	MD				7,89														
mdL4	MD				5,47														
mdL5	MD				7,28														
mdL1m	MD			8,11	6,97			7,35											
mdL2m	MD			7,31	6,73			6,7											
mdL3m	MD			7,02	6,2			6,39											
mdL4m	MD			4,33	3,93			3,83											
mdL5m	MD			6,26	5,8			5,5											
mdL1m;	MD			6,69	5,63			6,05											
mdL2m;	MD			5,91	5,37			5,38											
mdL3m;	MD			5,73	4,81			5,05											
mdL4m;	MD			2,93	4,33			2,52											
mdL5m;	MD			4,86	2,61			4,22											
mdL1m;	MD			5,32	4,35			4,8											
mdL2m;	MD			4,5	4,08			4,09											
mdL3m;	MD			4,26	3,61			3,85											
mdL4m;	MD			1,52	1,29			1,19											
mdL5m;	MD			3,43	3,21			2,95											
symfL	MD				1,68														
symfW	MD			0,36	0,28			0,27											0,31
CrW1	MD	0,66		0,84	0,63	0,51		0,83	0,72	0,83			0,71			1,01			0,86
CrW2	MD	0,74		0,83	0,65	0,64		0,89	0,88	0,74			0,75			1,02			0,96
fpL	MD	0,72		1,1	0,85	0,83	0,76	0,9	0,87	0,75	0,84	0,84	1			0,78	0,91		0,88
fpH	MD	0,57		0,98	0,69	0,65	1,15	0,53/1	0,72	0,58/1	0,62/1	0,8	1,05			0,68	0,92		0,77
mdH1	MD			1,55	1,35			1,36							1,31				1,59
mdH2	MD			1,47	1,31	1,12		1,31							1,3				1,48
mdH3	MD			1,42	1,18	1,08		1,25	1,19	1,27	1,1	1,23	1,36			1,3	1,41		1,48
Cd1Cd2	MD	1,82		2,06	1,53	1,69	2,1	1,81	1,68	1,71	1,84					1,83			2,03
Cd1Cd3	MD	1,62		1,86	1,45	1,4	1,82	1,59	1,49	1,41	1,65					1,61			1,86
Cd1Cd1	MD	0,71		0,93	0,41	0,75	0,83	0,88	0,6	0,88	0,73					0,68			0,99
Cd4Cd5	MD	1,4		1,74	1,52	1,26	1,85	1,56	1,62	1,62	1,47					1,6			1,52
Cd6Cd7	MD	0,52		0,71	0,54	0,55	0,64	0,61	0,52	0,51	0,58					0,59			0,66
Cd8Cd9	MD	0,38		0,46	0,37	0,37	0,53	0,46	0,43	0,4	0,46					0,51			0,38





## SF IId: Biometrical data of individual Q2 specimens

variable	category	Q2																Q3				
		Chlum 4S-K	Konéprusy JK/2				Konéprusy JK/3				Konéprusy C718				Chlum 4B/11	Dobruvka 2						
		Nn1	Nn2	Nn3	Nn4	Nn1	Nn2	Nn3	Nn4	Nn5	Nn6	Nn7	Nn8	Nn9	Nn10	Nn11	Nn12	Nn13	Nn14	Nn15	Nn16	
Cr1	MD		0,58	0,54	0,51								0,91		0,65	0,61	0,78	0,59	0,64			0,47
Cr2	MD		0,8	0,68									1,08		0,95	0,93	1,04	0,88	0,91			0,83
Cr3	MD		0,98	1,19									1,27		1,13	1,12	1,35	1,2	1,33			0,95
Cr4	MD		0,82	1,19	1,09								1,13		1,04	1,15	1,04	0,77	1,4			1,21
Cr5	MD		0,74	0,68	0,66								0,93		0,79	0,94	0,73	0,68	0,82			0,96
CdL (lat)	MD		1,19	1,02	1,01								1,35			1,1	1,05	0,98	1,09			1,09
CdH1	MD		1,55	1,47	1,53								1,58			1,37	1,37	1,52	1,36			1,45
CdH2	MD		1,26	1,24	1,23								1,3		1,37	1,17	1,06	1,17	1,2			1,23
AngL	MD															1,77		1,19	2,35			1,22
RmL	MD		2,03	2,11	2,17								1,98		2,1	1,92	2,06	2,07	2,05			2,25
CorH	MD		4,05	4,24	4								4,23		4,06	4,26	4,05	4,04	4,53			4,11
FM	MD																4,95	4,79				
Lz1-m3	MD																					
Hmd	MD	0,88	1,32	1,31	1,33								1,32	1,23	1,39	1,45		1,06				
Lzp	MD																					
m1m3	MD												4,25		4,13							
CdL(ling)	MD		1,21	1,05	1,01								1,34			1,17	1,17	1,19	1,16			1,15
CdH	MD		3,22	3,2	3,04								3,38			3,26	3,21	3,31	3,4			3,11
RM1	MD		3,91	4,07	3,8								4		3,94	4,21	3,91	4				3,97
RM2	MD		2,98	3,23	2,86								2,93		3,11	2,98	3,28	2,91	3,12			3,15
RM3	MD		2,23	2,57	3,04								2,17		2,18	2,12	2,63	2,31	2,3			2,34
CrH1	MD		4,04	4,21	3,97								4,36		4,01	4,19	4,19	4,08	4,52			4,07
CrH2	MD		4,06	4,25	3,94								4,3		3,96	4,17	3,96	4,14	4,48			4,08
CrH3	MD		2,34	2,49	2,41								2,56		2,5	2,46	2,44	2,47	2,55			2,35
CrH4	MD		3,56	3,72	3,34								3,78		3,49	3,62	3,82	3,51	3,92			3,49
CrH5	MD		3,35	3,47	3,12								3,51		3,18	3,47	3,36	3,23	3,7			3,34
CrH6	MD		2,8	3,07	2,77								2,79		3,01	2,81	3,09	2,68	2,9			2,84
mdL1	MD																					
mdL2	MD																					
mdL3	MD																					
mdL4	MD																					
mdL5	MD																					
mdL1m	MD		8,15	7,99									8,26			8,07						
mdL2m	MD		7,42	7,38									7,37		7,33	7,35						
mdL3m	MD		6,94	7,04									6,88		6,86	6,96						
mdL4m	MD		4,53	4,15									4,45		4,39	4,44						
mdL5m	MD		6,17	6,2									6,03		5,95	6,07						
mdL1m	MD			6,58	6,6								6,89									
mdL2m	MD			5,94	5,89								6,08		5,81							
mdL3m	MD			5,56	5,57								5,58		5,36							
mdL4m	MD			2,86	3								3,17		2,81							
mdL5m	MD			4,87	4,74								4,78		4,43							
mdL1m	MD												5,57									
mdL2m	MD												4,68		4,43							
mdL3m	MD												4,29		4,06							
mdL4m	MD												1,75		1,47							
mdL5m	MD												3,34		3,11							
symfL	MD														2,34							
symfW	MD		0,3												0,4							
CrW1	MD			0,57	0,54	0,57							0,66		0,83	0,66	0,76	0,56	0,7			0,53
CrW2	MD			0,78	0,76	0,77							0,99		0,91	0,84	0,94	0,91	0,76			0,85
fpL	MD				1,96	1,11							1,39		0,85	0,87	0,83	0,85	0,91			0,96
fpH	MD				0,87	0,85							0,87		0,95	0,75	0,98	0,95	1,04			0,73
mdH1	MD		1,36	1,46	1,34								1,41	1,38	1,42	1,6	1,34					
mdH2	MD	0,89		1,37	1,29	1,33							1,37	1,22	1,33	1,41	1,36					
mdH3	MD	0,88		1,4	1,36	1,32							1,38		1,31	1,48	1,54	1,22				1,25
Cd1Cd2	MD			2,17	2,17	1,97							2,16			2	2,08	2,09	2,19			1,96
Cd1Cd3	MD			1,9	1,85	1,77							1,82			1,75	1,87	2,02	1,96			1,74
Cd1Cd1	MD			0,9	0,93	0,71							1			0,93	0,96	0,95	0,93			0,76
Cd4Cd5	MD			1,53	1,64	1,6							1,81		1,65	1,55	1,52	1,58	1,68			1,54
Cd6Cd7	MD			0,59	0,67	0,62							0,63		0,59	0,61	0,64	0,68	0,59			0,5
Cd8Cd9	MD			0,46	0,44	0,35							0,47		0,4	0,43	0,53	0,39	0,43			0,38







### SF III: List of fossil records of European Nectogalini (except for *Macroneomys* and *Nesiotites*) based on the literary resources

*Asoriculus gibberodon*: MN12 Tardosbánya (Hungary) - Mészáros 1998; MN12-13 Vértesacska (Hungary) - Joniak et al. 2017; MN13 Polgárdi 4 (Hungary) - Mészáros 1999, 2000; MN13 Fuente del Viso (Spain) - van den Hoek Ostende and Furió 2005; MN13 Purcal (Spain) 4 - van den Hoek Ostende and Furió 2005; MN13 Brisighella (Italy) - Rofes and Cuenca-Bescós 2006; MN13 Monticino (Italy) - Rofes and Cuenca-Bescós 2006; MN13 Salobrena (Spain) - Crochet 1986; MN13 Moncucco (Greece) - Angelone et al. 2011; MN13 Maritsa (Greece) - Doukas 2005; MN13 Kessani (Greece) - Vasileiadou et al. 2012; MN13 Silata (Greece) - Doukas 2005; MN13-14 Maramena (Greece) - Doukas et al. 1995; MN14 Dorkovo (Bulgaria) - Rzebik-Kowalska and Popov 2005; MN14 Mont Hélène (France) - Crochet 1986; MN14 Osztramos 1 (Hungary) - Jánossy 1973 as *Episoriculus borsodensis*, Reumer 1984 as *Episoriculus gibberodon*; MN14 Osztramos 3 (Hungary)- Jánossy 1973 as *Episoriculus tornensis*, Reumer 1984 as *E. gibberodon*; MN14 Osztramos 9 (Hungary) - Reumer 1984 as *E. gibberodon*; MN14 Osztramos 13 (Hungary) – Reumer 1984 as *E. gibberodon*, MN14 Podlesice (Poland) - Rzebik-Kowalska 1981 as *E. borsodensis*; MN14 Zamkowa Dolna B Cave (Poland) - Rzebik-Kowalska 1994 as *E. gibberodon*; MN14 Kessani (Greece) - Vasileiadou et al. 2012; MN14 Silata (Greece) - Doukas 2005; MN14 Tollo de Chiclana 1, 1B, 3, 13 (Spain) - Minwer-Barakat et al. 2010; MN14 Cuzo 1 (Spain) - van den Hoek Ostende and Furió 2005; MN14 - Alhaurín el Grande-1 (Spain) - Guerra Merchán et al. 2013; MN14 La Gloria 4 (Spain) - Mein et al. 1990 as *E. gibberodon*; MN14 Peralejos E (Spain) - van den Hoek Ostende and Furió 2005 as *E. gibberodon*; MN14 Villalba Alba Rio 1 (Spain) - van den Hoek Ostende and Furió 2005 as *E. gibberodon*; MN14-15 Zalesiaky 1B (Poland) - Rzebik-Kowalska 1994 as *E. gibberodon*; MN14-15 Vértesacska (Hungary) - Joniak et al. 2017; ? Nimes (France) - Crochet 1986 as *E. gibberodon*; Serrat-d'en-Vacquer - Crochet 1986 as *E. gibberodon*; MN16 Sete (France) - Jammot 1977 as *E. gibberodon*; MN15 Apolakkia (Greece) - van de Weerd et al. 1982; MN15 Węże 1 (Poland) - Rzebik-Kowalska 1981, 1994 as *E. gibberodon*, MN15 Ivanovce 2 (Slovakia) – Fejfar and Sabol 2005; MN15 Apolakkia (Greece) - Doukas 2005; MN15 La Calera (Spain) - van den Hoek Ostende and Furió 2005; MN15 Asta Regia (Spain) - van den Hoek Ostende and Furió 2005, Castillo and Agustí 1996; MN15 El Arquillo 3 (Spain) - Crochet 1986 as *E. gibberodon*; MN15 Layna (Spain) - Crochet 1986 as *E. gibberodon*; MN15 Lomas de Casares 1 (Spain) - Mein et al. 1990 as *E. gibberodon*; MN15 Tollo de Chiclana 1, 1B, 3, 13 (Spain) - Minwer-Barakat et al. 2010; MN15 Gundersheim-Findling (Germany) - Ziegler et al. 2005, Dahlmann and Storch 1996; MN15 Deutsch-Altenburg 9, 20 (Austria) - Ziegler and Daxner-Höck 2005; MN15-16 Dunaalmás 4 (Hungary) – Reumer 1984 as *E. gibberodon*; MN16 Deutch-Altenburg 9, 20 (Austria) - Ziegler and Daxner-Höck 2005 as *E. gibberodon*; MN16 Tollo de Chiclana 1, 1B, 3, 13 (Spain) - Minwer-Barakat et al. 2010; MN16 Moreda (Spain) - van den Hoek Ostende and Furió 2005; MN16 Orrios 3 (Spain) - van den Hoek Ostende and Furió 2005; MN16 Cascina Arondelli (Italy) - Kotsakis et al. 2003; MN16 Balaruc 2 (France) - Crochet 1986 as *E. gibberodon*; MN16 Seynes (France) - Crochet 1986 as *E. gibberodon*; MN16 Tourkobounia 1 (Greece) - Reumer and Doukas 1985 as *E. gibberodon*; MN16 Beremend 5 (Hungary) – Reumer 1984 as *E. gibberodon*; MN16 Osztramos 7 (Hungary) – Reumer 1984 as *E. gibberodon*; MN16 Rębielice Królewskie 1A (Poland) - Rzebik-Kowalska

1994 as *E. gibberodon*; MN16 Rębielice Królewskie 2 - Rzebik-Kowalska 1994 as *E. gibberodon*; MN16 Plešivec (Slovakia) - Rofes and Cuenca-Bescós 2006; MN16 Capo Mannu D (Italy) - Furió and Angelone 2010; MN17 Mountoussé 5 (France) - Clot et al. 1976 as *E. gibberodon*; MN17 Rivoli Veronese (Italy) - Kotsakis et al. 2003; MN17 Villány 3 (Hungary) - Reumer 1984 as *Soriculus kubinyii*; MN17 Kielniki 3B (Poland) - Rzebik-Kowalska 1994 as *E. gibberodon*; MN17 Zamkowa Dolna and Cave (Poland) - Rzebik-Kowalska 1994b as *E. gibberodon*; MN17 Plešivec (Slovakia) - Fejfar 1964; Q1 Les Valerots (France) - Jammot 1977 as *E. gibberodon*; Q1 Mas Rambault (France) - Jammot 1977 as *E. gibberodon*; Q1 Včeláre 4A/5 (Slovakia) - Fejfar and Horáček 1983; MN17 Beremend 1-3 (Hungary) – Petényi 1864 as *Crocidura gibberodon*; MN17 Beremend 1-3 (Hungary) – Jánossy 1986 as *Episoriculus gibberodon*; MN17 Beremend 17 (Hungary) – Jánossy 1986 as *E. gibberodon*; Q1 Somssichhegy 1 (Hungary) – Reumer 1984 as *E. gibberodon*; Q1 Villány 5 (Hungary) – Jánossy 1986 as *Soriculus gibberodon*; MN17 Varshets (Bulgaria) – Rzebik-Kowalska and Popov 2005; Q1 Betfia X, XI (Romania) – Terzea 1994 as *E. gibberodon*; Q1 Betfia VII/I, IX, XII (Romania) – Rzebik-Kowalska 2002; Q1 Soave Cava Sud (Italy) - Kotsakis et al. 2003; Q1 Monte la Mesa (Italy) – Kotsakis et al. 2003; MN17/Q1 – Monte Argentario (Italy) - Siori et al. 2014; MN17/Q1 Barranco-León 5/D (Spain) – Agustí et al. 2010; MN17/Q1 Venta Micena (Spain) – Agustí et al. 2010; MN17 Fuente Nueva 3 (Spain) – Rofés and Cuenca-Bescós 2006; MN17 Sima del Elefante (Spain) – Rofés and Cuenca-Bescós 2006; Q1 Marathoussa (Greece) – Koufos et al. 2001; Q1 Gran Dolina (Spain) - Moya-Costa et al. 2023; MN17 Varshets (Bulgaria) – Rzebik-Kowalska and Popov 2005; Q1 Somssichhegy 1, 2 (Hungary) - Jánossy 1986, Pazonyi et al. 2018, Botka and Mészáros 2017 ; Q1 Süttö 21 (Hungary) – Pazonyi et al. 2023 \* ***Asoriculus aff. gibberodon***: MN13 Brisighella (Italy) - De Giuli 1989 as *Episoriculus aff. gibberodon*; MN16 Nuraghe Su Casteddu (Italy) - Esu and Kotsakis 1979 as *E. aff. gibberodon* \* ***Asoriculus cf. gibberodon***: MN13 Odesa (Ukraine) - Rzebik-Kowalska and Rekovets 2016; MN17-Q1 Včeláre 3, 4 (Slovakia) – Fejfar and Horáček 1983 as *Episoriculus cf. gibberodon*; MN17 Koliňany (Slovakia) – Fejfar and Horáček 1983 as *E. cf. gibberodon*; MN17 Pirro Nord (Italy) - De Giuli et al. 1990 as *E. cf. gibberodon* \* ***Asoriculus burgioi***: MN17 Monte Pellegrino (Italy) – Masini and Sarà 1998 \* ***Asoriculus thenii***: Q1 Podumci 1 (Croatia) - Malez and Rabeder 1984 as *Episoriculus thenii*; Q1 Tatinja Draga (Croatia) - Malez and Rabeder 1984 as *E. thenii* \* ***Asoriculus maghrebiensis***: MN17 Irhoud Ocre (Morocco) - Rzebik-Kowalska 1988 as *Episoriculus maghrebiensis*; MN17 Ahl al Oughlam (Morocco) - Geraards 1995 as *E. maghrebiensis* \* ***Asoriculus n. sp. 1***: MN15 Ivanovce (Slovakia) - Fejfar 1966a \* ***Asoriculus sp.***: MN11 Frunzovka 2, Popovo, Verknyaya Krinitza 2 (Ukraine) – Rzebik-Kowalska and Rekovets 2016; MN13 Santa Margarida (Portugal) - Antunes and Mein 1995 as *Episoriculus sp.*; MN13? El Arquillo 4 (Spain); MN15 Escorihuela B (Spain) - Mein et al. 1990 as *Episoriculus sp.*; MN16 Médas (Spain) - Jammot 1977 as *Episoriculus adroveri*, Crochet 1986. \* ***Asoriculus castellarini***: Q1 Soave Cava Sud (Italy) - Pasa 1947 as *Neomys castellarini* \* ***Asoriculus cf. castellarini***: MN17 Včeláre 3 (Slovakia) - Fejfar and Horáček 1983 as *Episoriculus cf. castellarinii*; Q1 Zabia Cave (Poland) - Bosák et al. 1982 as *Episoriculus cf. castellarinii*; Q1 Monte Peglia (Italy) - van der Meulen 1973 as *Episoriculus cf. castellarinii* \* ***Neomys newtoni***: Q2 Koněprusy C718 and JK (Czech Republic) - Fejfar 1964; Q2 Voigstedt (Germany) - Maul 1990; Q1 Żabia Cave (Poland) - Rzebik-Kowalska 2013; Q2 Zalesiaky 1A (Poland) - Rzebik-Kowalska 1991, 1994; Q2 Upper Freshwater Bed, West Runton (Great Britain) - Hinton 1911; Q2 Somssichhegy 2 (Hungary) - Pazonyi et al. 2018; Q2 Kozi Grzbiet (Poland) - Rzebik-Kowalska 1991, 1994; Q2 West Runton (Great Britain) - Maul and Parfitt 2010; Q2 Medzybozh (Ukraine) - Rzebik-Kowalska and

Rekovets 2016; Q2 Kuznetsovka (Ukraine) - Agadjanian and Kondrashov 2007; Q3 Schöningen (Germany) - van Kolfschoten 2014; Q2 Voigstedt (Germany) - Maul and Parfitt 2010; Q2 Treugolnaya Cave (Russia) - Zaitsev and Baryshnikov 2002; Q2 Přezletice (Czech Republic) - Maul and Parfitt 2010 \* **Neomys aff. newtoni**: Q1 Soave Cava Sud (Italy): Kotsakis et al. 2003 \* **Neomys cf. newtoni**: Q1 Monte Peglia (Italy): Kotsakis et al. 2003; Q1 Monte Peglia (Italy) - van der Meulen 1973; Q1 Betfia VII/3 (Romania): Rzebik-Kowalska 2000; Q3 La Fage (France) - Jammot 1977; Q3 Miesenheim 1 (Germany) - von Koeningswald et al. 1991; Q2 Westbury-Sub-Mendip (Great Britain) - Bishop 1982 \* **Neomys browni**: Q3 Middle Terrace, Grays Thurrock (Great Britain) - Hinton 1911; Q3 Cudmore Cave, Essex (Great Britain) - Roe et al. 2009 \* **Neomys intermedius**: Q2 Breitenberghöhle (Germany) - Brunner 1957; Q3 Markgrabenhöhle (Germany): Brunner 1952 \* **N. hintoni**: Q3 Treugolnaya Cave (Russia) - Zaitsev and Baryshnikov 2002; Q3 Mezmaiskaya (Russia): Zaitsev and Osipova 2004 \* **N. cf. hintoni**: Q2 Haykadzor (Armenia) - Tesakov et al. 2019; \* **Neomys fodiens**: Q3 Grotte de la Carriere (France) - Reumer 1996; Q3 Grotte du Cap de la Bielle (France) - Reumer 1996; Q3 La Fage (France) - Jammot 1977; Q3 Grotta Minore di San Bernardino (Italy) - Bartolomei and di Broglio 1964; Q3 Maastricht-Belvédère 3 and 4 (Netherlands) - van Kolfschoten 1990a; Q3/Q4 Schönfeld (Germany) – van Kolfschoten 2000; Q3 cave in Paralui valley (Romania) - Rădulescu and Samson 1992; Q3-Q4 aluvial sediments of Dnepr (Ukraine) - Topachevsky 1961; Q4 Goyet Cave (Belgium) - Sickenberg 1939; Q4 Caverne Marie-Jeanne (Belgium) - Gautier and de Heinzelin 1980; Q4 Trou de Frontal (Belgium) - Rutot 1910 as *Crossopus fissidens*; Q4 Bacho Kiro Cave (Bulgaria) - Rzebik-Kowalska 1982; Q4 Mecha Dupka Cave (Bulgaria) - Popov 1984; Q4 Grotte Noëlle (France) - Reumer 1996; Q4 La Baume de Gonvilars (France) - Chaline 1972; Q4 Santenay (France) - Chaline 1972; Q4 Atapuerca, Portalón (Spain) - Cuenca-Bescos 2015; Q4 Dohlenloch (Germany) - Brunner 1952; Q4 Erkenbrechtsweiler (Germany) - von Koenigswald and Schmidt-Kittler 1972; Q4 Fuschloch in Krockstein (Germany) - Arnold et al. 1982; Q4 Nikolaushöhle (Germany) - Heller 1937, Rathgeber 2004; Q4 Reinchentalloch (Germany) - Brunner 1959a; Q4 Schmiedberg-Abri (Germany) - Brunner 1959b; Q4 Weinberghöhle 1 (Germany) - von Koenigswald and Müller-Beck 1975; Q4 Sesselfelsgrotte (Germany) - van Kolfschoten 2014; Q4 Istállóskő (Hungary) - Jánossy 1986; Q4 Puskapáros (Hungary) - Kormos 1911; Q4 Petényi Cave (Hungary) - Mészáros 2004; Q4 Cave A, Veia (Italy) - Sala 1990; Q4 Borsuka Cave, layer 6 (Poland) - Wilczynski et al. 2012; Q4 Raj Cave, layers 1-10 (Poland) - Kowalski 1972; Q4 Bursucilor Cave (Romania) - Terzea 1974; Q4 Valea Coacazei Cave (Romania) - Terzea 1971; Q4 Novy 1 Cave (Slovakia) - Schaefer 1975; Q4 Erralla (Spain) - Sesé 1994; Q4 Ettingen (Switzerland) - Sarasin and Stehlin 1924; Q4 Kastelhöhle (Switzerland)- Stampfli 1959; Q4 Dog Holes Cave (Great Britain) - Hinton 1911; Q4 Ightham Fissure (Great Britain) - Hinton 1911; Q4 Stutton (Great Britain) - Stuart 1995; Q4 Kozlovka (Russia) - Rzebik-Kowalska 2008; Q4 Bajslan-Tash, southern Ural (Russia) - Fadeeva et al. 2024; Q4 Bajslan-Tash, southern Ural (Russia) - Fadeeva et al. 2024; Q4 Tashmurun Grotto, southern Ural (Russia) - Fadeeva et al. 2024; Q4 Lopatino (Belarus) - Ivanov 2016; Q4 Drozdy (Belarus) - Ivanov 2016; Q4 Kyharovka (Belarus) - Ivanov 2016; Q4 Sinjavskaja Sloboda (Belarus) - Ivanov 2016; Q4 Luzinovka (Belarus) - Ivanov 2016; Q4 Semenovichi-2 (Belarus) - Ivanov 2016; Q4 Pionerskii (Belarus) - Ivanov 2016; Q4 Zarach'e (Belarus) - Ivanov 2016; Q4 Nov. Rutkovoichi (Belarus) - Ivanov 2016; Q4 Pisede (Germany) - Heinrich 1983; Q4 Broion Cave (Italy) - Pasa 1952; Q4 Palfy Cave (Slovakia) - Holec 1985; Q4 Maasvlakte (Netherlands) - Vervoot-Kerkhoff and van Kolfschoten 1988; Q4 Gumerovo Cave (Russia) - Danukalova et al. 2014; Q4 Zigan Cave (Russia) - Danukalova et al. 2014; Q4 Voronin Cave (Russia) - Izvarin et al. 2020 \* **Neomys fodiens niethammeri**: Q4 Punta Locero

III Cave (Spain) – Álvarez-Vena et al. 2023 \* *Neomys aff. fodiens*: Q4 Kálmán Lambrecht Cave (Hungary) - Jánossy 1986; \* *Neomys cf. fodiens*: Q3 Maastricht-Belvédère 2A (Netherlands) - van Kolfschoten 1990; Q3-Q4 Nixloch (Austria) - Rabeder 1992; Q3-Q4 Bois Roche (France) - Sesé a Villa 2008; Q3-Q4 La Baume de Gigny (France) - Jammot 1989; Q3-Q4 Grotta Maggiore di San Bernardino (Italy) - López-García et al. 2017; Q4 Hohle Fels Cave (Germany) - Luzi et al. 2022; Q4 Caverne Marie-Jeanne (France) - López-García et al. 2017; Q4 Grotta della Ferrovia (Italy) - Ceregatti et al. 2023; Q4 Komarowa Cave (Poland) - Rzebik-Kowalska 2006 \* *Neomys anomalus*: Q4 Atapuerca, Portalón (Spain) - Cuenca-Bescos 2015; Q4 El Mirador Cave (Spain) - Bañuls-Cardona et al. 2017, Q4 Punta Locero III Cave (Spain) – Álvarez-Vena et al. 2023 \* *Neomys milleri*: Q3 Hundsheim (Austria) - Rabeder 1972a; Q3-Q4 Bacho Kiro Cave, layer 12-13 (Bulgaria) - Rzebik-Kowalska 1982 as *Neomys anomalus*; Q3-Q4 Schmiedberg-Abri (Germany) - Brunner 1959b; Q4 Pisede (Germany) - Heinrich 1983 as *Neomys anomalus*; Q4 Borsuka Cave, layer 6 (Poland) - Wilczynski 2012 as *Neomys anomalus*; Q4 Grotta del Sambuco (Italy) - Luzi et al. 2022 as *Neomys anomalus* \* *Neomys cf. milleri*: Q3/Q4 Schönfeld (Germany) – van Kolfschoten 2000 as *Neomys cf. anomalus*; Q4 Chlum 7 (Czech Republic) - Horáček and Sánchez Marco 1984 as *Neomys gr. anomalus*; Q4 Peskö (Slovakia) Horáček and Ložek 1988 as *Neomys cf. anomalus*; Q3-Q4 Grotta Maggiore di San Bernardino (Italy) - López-García et al. 2017 as *Neomys cf. anomalus*; Q4 Hohle Fels Cave (Germany) - Luzi et al. 2022 as *Neomys cf. anomalus*; Q4 Grotta della Ferrovia (Italy) - Ceregatti et al. 2023 as *Neomys cf. anomalus*; Q4 Buroe (Belarus) - Ivanov 2016 as *Neomys cf. anomalus*; Q4 Semenovich-2 (Belarus) - Ivanov 2016 as *Neomys cf. anomalus*; Q4 Voroncha (Belarus) - Ivanov 2016 as *Neomys cf. anomalus* \* *Neomys teres*: Q4 Treugolnaya Cave (Russia) - Zaitsev and Baryshnikov 2002 as *Neomys schelkovnikovi* \* *Neomys sp.*: Q3 Atapuerca, Gran Dolina TD10 (Spain) - Cuenca-Bescos et al. 2015; Q3 Mountoussé 3 (France) - Clot et al. 1976; Q3 Pongor-lyuk Cave, layer 7 (Hungary) - Hír 1987; Q3 Loara (Italy) - Bartolomei 1964; Q3 Rhenen (Netherlands) - van Kolfschoten 1990a; Q3 Casian Cave (Romania) - Samson and Rădulescu 1972; Q3 Gura Dobrogei 1 Cave (Romania) - Samson and Rădulescu 1972; Q3 Rotbav-Dealul Tiganilor (Romania) - Rădulescu and Samson 1985; Q3 East Farm (Great Britain) - Ashton et al. 1994; ?Q3 Fommenaus Cave (Germany) - Storch 1978b; ?Q3 Mezzena (Italy) - Sala 1990; ?Q3 Ariusd (Romania) - Rădulescu and Samson 1985; ?Q3 Cave N3 (Slovakia) - Fejfar and Sekyra 1964; ?Q3 Valdegoba (Spain) - Sesé 1994; ?Q3 Vrelska Cave (Serbia) - Marković and Pavlović 1991; Q4 Komarowa Cave (Poland) - Rzebik-Kowalska 2006; Q4 Hohle Fels Cave (Germany) - Luzi et al. 2022; Q4 Riparo Mochi (Italy) - Berto et al. 2019; Q4 Rasik (Russia) - Fadeeva 2016; Q4 Wateringbury, Kent (Great Britain) - Kerney 1954.

## REFERENCES – SF III

Agadjanian, A. K., Kondrashov, P. E. (2007): Molluscs and small mammals from the Kuznetsovka locality, Pleistocene of the Oka-Don Plain. – *Paleontological Journal*, 41(4): 395-406.

Agustí, J., Blain, H. A., Furió, M., De Marfá, R., Santos-Cubedo, A. (2010): The early Pleistocene small vertebrate succession from the Orce region (Guadix-Baza Basin, SE Spain) and its bearing on the first human occupation of Europe. – *Quaternary International*, 223: 162-169.

Angelone, C., Colombero, S., Esu, D., Giuntelli, P., Marcolini, F., Pavia, M., Trenkwalder, S., van den Hoek Ostende, L. W., Zunino, M., Pavia, G. (2011): Moncucco Torinese, a new post-evaporitic Messinian fossiliferous site from Piedmont (NW Italy). – *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, 259(1): 89–104.

Antunes, M. T., Mein, P. (1995): Nouvelles données sur les petits mammifères du Miocène terminal du Bassin de Alvalade, Portugal. – *Comunicações do Instituto Geológico e Mineiro*, 81: 85–96.

Arnold, A., Böhme, G., Fischer, K., Heinrich, W. (1982): Eine neue jungpleistozäne Wirbeltierfauna aus Rübeland (Harz). (Vorläufige Mitteilung). – *Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin. Mathematisch-naturwissenschaftliche Reihe*, 31(3), 169-175.

Ashton, N. M., Bowen, D. Q., Holman, J. A., Hunt, C. O., Irving, B. G., Kemp, R. A., Lewis, S. G., McNabb, J., Parfitt, S., Seddon, M. B. (1994): Excavations at the lower palaeolithic site at East Farm, Barnham, Suffolk 1989–92. – *Journal of the Geological Society*, 151(4): 599–605.

Álvarez-Vena, A., Marín-Arroyo, A. B., Álvarez-Lao, D. J., Laplana, C., Arriolabengoa, M., Ballesteros, D., Aranburu, A., Bilbao, P., Astorqui, Á., Díaz-Casado, Y. (2023): Mammalian turnover as an indicator of climatic and anthropogenic landscape modification: A new Meghalayan record (Late Holocene) in northern Iberia. – *Palaeogeography, Palaeoclimatology, Palaeoecology*, 616, 111476.

Bañuls-Cardona, S., López-García, J. M., Hidalgo, J. I. M., Cuenca-Bescós, G., Vergès, J. M. (2017): Lateglacial to Late Holocene palaeoclimatic and palaeoenvironmental reconstruction of El Mirador cave (Sierra de Atapuerca, Burgos, Spain) using the small-mammal assemblages. – *Palaeogeography, Palaeoclimatology, Palaeoecology*, 471, 71-81.

Bartolomei, G. (1964): Mammiferi di breccie pleistoceniche dei Colli Berici (Vicenza). – *Memorie del Museo Civico di Storia Naturale di Verona*, 12, 221-290.

Bartolomei, G., Broglio, A. (1964): Primi risultati delle ricerche nella Grotta minore di San Bernardino nei Colli Berici. – *Università degli studi*, 15 (1): 157-185.

Berto, C., Santaniello, F., Grimaldi, S. (2019): Palaeoenvironment and palaeoclimate in the western Liguria region (northwestern Italy) during the Last Glacial. The small mammal sequence of Riparo Mochi (Balzi Rossi, Ventimiglia). – *Comptes Rendus Palevol*, 18(1), 13-23.

Bishop, M. J. (1982): The mammal fauna of the Early Middle Pleistocene cavern in fill site of Westbury-sub-Mendip Somerset. – *Special Papers in Paleontology*, 28: 1–108.

Bosák, P., Głazek, J., Horáček, I., Szykiewicz, A. (1982): New locality of Early Pleistocene vertebrates-Żabia Cave at Podlesice, Central Poland. – *Acta Geologica Polonica*, 32(3-4): 217–226.

Botka, D., Mészáros, L. (2017): *Asoriculus* and *Neomys* (Mammalia, Soricidae) remains from the late Early Pleistocene Somssich Hill 2 locality (Villány Hills, Southern Hungary). – *Fragmenta Palaeontologica Hungarica*, 34, 105-125.

Brunner, G. (1952): Die Markgrabenhöhle bei Pottenstein (Oberfranken). – *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, 457- 471.

Brunner, G. (1957): Die Breitenberghöhle bei Gössweinstein ob Franken. – *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, 352-403.

Brunner, G. (1959): Das Schmiedberg-Abri bei Hirschbach (Oberpfalz). *Paläontologische Zeitschrift*, 33(3): 152–165.

Castillo, C., Agustí, J. (1996): Early Pliocene rodents (Mammalia) from Asta Regia (Jerez Basin, Southwestern Spain). – *Proceedings of the Royal Netherlands Academy of Arts and Sciences*, 99(1): 25–43.

Ceregatti, L., Berto, C., Fewlass, H., Baca, M., Luzi, E., Brancaleoni, G., Pereswiet-Soltan, A., Peresani, M. (2023): Integration of direct radiocarbon dating, genetic studies and taxonomy of small mammals to investigate the chronology of past climatic oscillations: The Last Glacial Maximum sequence of Grotta della Ferrovia (Fabriano, Italy). – *Quaternary Science Reviews*, 309: 108095.

Chaline, J. (1972): Les Rongeurs du Pléistocène Moyen et Supérieur de France (Systématique, Biostratigraphie, Paléoclimatologie). – *Cahiers de Paléontologie*, 1–410.

- Clot, A., Chaline, J., Jammot, D., Mourer, Chauviré, C., Rage, J. C. (1976): Les poches fossilifères du Pléistocène moyen et inférieur de Mountoussé (Hautes-Pyrénées). – *Bulletin de Société d' Histoire Naturelle Toulouse*, 112: 146–161.
- Crochet, J. Y. (1986): Insectivores pliocènes du sud de la France (Languedoc-Roussillon) et du nord-est de l'Espagne. – *Palaeovertebrata*, 16(3): 145-171.
- Cuenca-Bescós, G., Blain, H. A., Rofes, J., Lozano-Fernández, I., López-García, J. M., Duval, M., Galán, J., Núñez-Lahuerta, C. (2015): Comparing two different Early Pleistocene microfaunal sequences from the caves of Atapuerca, Sima del Elefante and Gran Dolina (Spain): biochronological implications and significance of the Jaramillo subchron. – *Quaternary International*, 389: 148-158.
- Dahlmann, T., Storch, G. (1996): A Pliocene (late Ruscinian) small mammal fauna from Gundersheim, Rheinhessen. – 2. Insectivores: Mammalia, Lipotyphla. *Senckenbergiana lethaea*, 76, 181-191.
- Danukalova, G., Osipova, E., Yakovlev, A., Yakovleva, T. (2014): Biostratigraphical characteristics of the Holocene deposits of the Southern Urals. – *Quaternary International*, 328: 244-263.
- Doukas, C. S. (2005): Greece. – In: van den Hoek Ostende, L. W., Doukas, C. S., Reumer, J. W. F. (eds), *The fossil record of the Eurasian Neogene insectivores (Erinaceomorpha, Soricomorpha, Mammalia)*, Part I. *Scripta Geologica Special Issue 5*, pp. 99-112.
- Doukas, C. S., van den Hoek Ostende, L. W., Theocharopoulos, C. D., Reumer, J. W. F. (1995): The vertebrate locality Maramena (Macedonia, Greece) at the Turolian-Ruscinian boundary (Neogene). – *Münchner Geowissenschaftliche Abhandlungen*, 28: 43-64.
- Esu, D., Kotsakis, T. (1979): Restes de vertèbres et de mollusques continentaux dans le Villafranchien de la Sardaigne. – *Géobios*, 12(1): 101-106.
- Fadeeva, T. (2016). Insectivorous mammals (Lipotyphla, Soricidae) of the Perm Pre-Ural in the Late Pleistocene and Holocene time. – *Quaternary International*, 420, 156-170.
- Fadeeva, T., Yakovlev, A., Gimranov, D., Kosintsev, P., Cheremiskina, K. (2024): Fossil insectivorous mammals (Eulipotyphla) of the southern Pre-Urals (Bashkortostan, Russia). – *Quaternary Science Reviews*, 325, 108480.
- Fejfar, O. (1964): Výzkum fosilních obratlovců ČSSR v roce 1963. – *Zprávy o geologických výzkumech v roce 1963*, 350-352.
- Fejfar, O. (1966): Über zwei neue Säugetiere aus dem Altpleistozän von Böhmen. – *Neues Jahrbuch für Geologie und Paläontologie, Monatshefte*, 11: 680–691.
- Fejfar, O., Horáček, I. (1983): Zur Entwicklung der Kleinsäugerfaunen im Villanyium und Alt-Biharium auf dem Gebiet der CSSR. – *Schriftenreihe der Gesellschaft für Geowissenschaften, Berlin*, 19(20): 111-207.
- Fejfar, O., Sabol, M. (2005): The Fossil Record of the Eurasian Neogene Insectivores (Erinaceomorpha, Soricomorpha, Mammalia), Part I. – *Scripta Geologica. Special Issue*, 5: 51–60.
- Fejfar, O., Sekyra, J. (1964): The periglacial sediments and fauna of caves in the High Tatras Mts. – *Československý kras*, 16, 57-66.
- Furió, M., Angelone, C. (2010): Insectivores (Erinaceidae, Soricidae, Talpidae; Mammalia) from the Pliocene of Capo Mannu D1 (Mandriola, central-western Sardinia, Italy). – *Neues Jahrbuch für Geologie und Paläontologie Abhandlungen*, 258: 229-242.
- Geraards, D. (1995): Rongeurs et insectivores (Mammalia) du Pliocène final de Ahl Al Oughlam (Casablanca, Maroc). – *Geobios*, 28(1): 99–115.
- De Giuli, C. (1989): The rodents of the Brisighella latest Miocene fauna. – *Bollettino della Società Paleontologica Italiana*, 28(2-3): 197-212.
- Guatier, A., de Heinzein, J. (1980): La caverne Marie-Jeanne (Hastière-Lavaux, Belgique). In: Gautier, A. (ed.), *II. Notes sur les mammifères*, 177, pp. 29-39.
- Guerra-Merchán, A., Serrano, F., Ruiz Bustos, A., Garcés Crespo, M., Insua-Arévalo, J. M., García-Aguilar, J. M. (2013): Approach to the Lower Pliocene marine-continental correlation from southern Spain. *The*

- micromammal site of Alhaurín el Grande-1 (Málaga Basin, Betic Cordillera, Spain). – *Estudios Geológicos*, 69(1): 85–96.
- Heinrich, W. D. (1983): Untersuchungen an Skelettresten von Insectivoren (Insectivora, Mammalia) aus dem fossilen Tierbautensystem von Pisede bei Malchin. Part 1: Taxonomische und biometrische Kennzeichnung des Fundgutes. – *Wissenschaftliche Zeitschrift der Humboldt-Universität zu Berlin*, 32, 681–698.
- Heller, F. (1937): Die fossile Mikrofauna der Magdalénien-Schicht in der Nikolashöhle bei Veringenstadt (Hohenzllern). – *Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Mathematisch-naturwissenschaftliche Klasse*, 1936 (11): 1–23, Heidelberg.
- Hinton, M. A. (1911): The British Fossil Shrews. – *Geological Magazine*, 8(12): 529–539.
- Hír, J. (1987): A new Oldenburg vertebrate fauna from the Bükk Mountains. – *Földrajzi Értésítő*, 36(3-4): 75–85.
- van den Hoek Ostende, L. W., Furió, M. (2005): Spain. – In: van den Hoek Ostende, L. W., Doukas, C. S., Reumer, J. W. F. (eds), *The Fossil Record of the Eurasian Neogene Insectivores (Erinaceomorpha, Soricomorpha, Mammalia)*, Part I. *Scripta Geologica Special Issue 5*, pp. 149–274.
- Holec, P. (1985): Vertebraten fauna des Quartärs in der Slowakei. – *Acta Geologica et Geographica Universitatis Comenianae, Geologica*, 39, 115–128.
- Horáček, I., Ložek, V. (1988): Palaeozoology and the Mid-European Quaternary past: scope of the approach and selected results. – *Rozpravy Československé akademie věd-řada matematických a přírodních věd*, 98(4): 5–102.
- Horáček, I., Sánchez-Marco, A. (1984): Comments on the Weichselian small mammal assemblages in Czechoslovakia and their stratigraphical interpretation. – *Neues Jahrbuch für Geologie und Paläontologie, Abhandlungen*, 169(3): 560–576.
- Ivanov, D. (2016): Chronology of micromammal assemblages on the territory of Belarus in the late glacial and Holocene. – *Slupskie Prace Geograficzne*, 13, 179-195.
- Izvarin, E. P., Ulitko, A. I., Nekrasov, A. E. (2020): Palaeontological description of Nizhneirginsky Grotto Upper Holocene sediments (Ufa Plateau, Fore-Urals) with taphonomic and palaeoenvironmental remarks based on bird and small-mammal assemblages. – *Quaternary International*, 546, 160-169.
- Jammot, D. (1977): *Les musaraignes (Soricidae, Insectivora) du Plio-Pléistocène d'Europe*. Unpublished Ph.D. Thesis, Université Dijon (Université de Bourgogne), Dijon, France, 341 pp.
- Jammot, D. (1989): Les insectivores. – *Gallia Préhistoire*, 27(1), 111-120.
- Jánossy, D. (1973): New species of *Episoriculus* from the Middle Pliocene of Osztramos (North Hungary). – *Annales historico-naturales Musei nationalis hungarici*, 65: 49-55.
- Jánossy, D. (1986): Pleistocene vertebrate faunas of Hungary. – Elsevier, Akadémiai Kaidó, Budapest, 202 pp.
- Joniak, P., Hír, J., Suján, M., Mészáros, L. (2017): Small mammals from Vértesacsza as a contribution to chronology of the late Miocene Zagyva Formation (W Hungary). – *Acta Geologica Slovaca*, 9(1): 15-24.
- Kerney, M. P. (1954): Note on the fauna of an early Holocene tufa at Wateringbury, Kent. – *Proceedings of the Geologists' Association*, 66(4): 293–296.
- von Koenigswald, W., Müller-Beck, H. (1975): Das Pleistozän der Weinberghöhlen bei Mauern (Bayern). – *Quartär*, 26, 107–118.
- von Koenigswald, W., Schmidt-Kittler, N. (1972): Eine Wirbeltierfauna des Riss/Würm-Interglazials von Erkenbrechtsweiler (Schwäbische Alb, Baden-Württemberg). – *Mitteilungen der Bayerischen Staatssammlung für Paläontologie und Historische Geologie*, 12: 143-147.
- van Kolfschoten, T. (2014): The smaller mammals from the Late Pleistocene sequence of the Sesselfelsgrötte (Neuessing, Lower Bavaria). – In: Freund, G., Reisch, L. (eds), *Sesselfelsgrötte VI. Naturwissenschaftliche Untersuchungen. Wirbeltiere I*. Franz Steiner Verlag, Stuttgart, pp. 27–119.
- van Kolfschoten, T. (1990): The evolution of the mammal fauna in the Netherlands and the middle Rhine Area (Western Germany) during the late Middle Pleistocene. – *Mededelingen Rijks Geologische Dienst*, 43(3): 1-69.



- van Kolfschoten, T. (2000): The Eemian mammal fauna of central Europe. – *Netherlands Journal of Geosciences*, 79(2-3): 269–281.
- van Kolfschoten, T. (2014): The Palaeolithic locality Schöningen (Germany): a review of the mammalian record. – *Quaternary International*, 326: 469-480.
- Kormos, T. (1911): Pliocene fossil assemblage from Polgárdi. – *Földtani Közlöny*, 41, 48-64.
- Kotsakis, T., Abbazzi, L., Angelone, C., Argenti, P., Barisone, G., Fanfani, F., Marcolini F., Masini, F. (2003): Plio-Pleistocene biogeography of Italian mainland micromammals. – *Deinsea*, 10(1): 313-342.
- Koufos, G. D., Vassiliadou, K. V., Koliadimou, K. K., Syrides, G. E. (2001): Early Pleistocene small mammals from Marathoussa, a new locality in the Mygdonia basin, Macedonia, Greece. – *Deinsea*, 8(1): 49–102.
- Kowalski, K. (1972): Studies on Raj Cave near Kielce (Poland) and its deposits. – *Folia Quaternaria*, 41: 45-59.
- López-García, J. M., Blain, H. A., Lozano-Fernández, I., Luzi, E., Folie, A. (2017): Environmental and climatic reconstruction of MIS 3 in northwestern Europe using the small-mammal assemblage from Caverne Marie-Jeanne (Hastière-Lavaux, Belgium). – *Palaeogeography, Palaeoclimatology, Palaeoecology*, 485: 622–631.
- López-García, J. M., Luzi, E., Peresani, M. (2017): Middle to Late Pleistocene environmental and climatic reconstruction of the human occurrence at Grotta Maggiore di San Bernardino (Vicenza, Italy) through the small-mammal assemblage. – *Quaternary Science Reviews*, 168: 42-54.
- Luzi, E., Berto, C., Calattini, M., Tessaro, C., Galiberti, A. (2022): Non-analogue communities in the Italian Peninsula during Late Pleistocene: The case of Grotta del Sambuco. – *Quaternary International*, 632: 132-138.
- Luzi, E., Blanco-Lapaz, À., Rhodes, S. E., Conard, N. J. (2022): Paleoclimatic and paleoenvironmental reconstructions based on the small vertebrates from the Middle Paleolithic of Hohle Fels Cave, SW Germany. – *Archaeological and Anthropological Sciences*, 14(6), 107-124.
- Malez, M., Rabeder, G. (1984): Neues Fundmaterial von Kleinsäugetern aus der altpleistozänen Spaltenfüllung Podumci 1 in Norddalmatien (Kroatien, Jugoslawien). – *Beiträge zur Paläontologie von Österreich*, 11, 439-510.
- Marković, Z., Pavlović, C. (1991): Prvi rezultati istraživanja faune Vrelskepećine (Bela palanka, Srbija). – *Geološki Anali Balk, Puluostrva*, 55(1): 221–230. (in Serbian)
- Masini, F., Sarà, M. (1998): *Asoriculus burgioi* sp. nov. (Soricidae, Mammalia) from the Monte Pellegrino faunal complex (Sicily). – *Acta zoologica cracoviensia*, 1(41).
- Maul, L. C., Parfitt, S. A. (2010): Micromammals from the 1995 Mammoth Excavation at West Runton, Norfolk, UK: Morphometric data, biostratigraphy and taxonomic reappraisal. – *Quaternary International*, 228(1-2): 91–115.
- Mein, P., Moissenet, E., Adrover, R. (1990): Biostratigraphy of the Upper Neogene of the Teruel Basin. – *Bioevents and faunal successions in the Iberian continental Tertiary*, 23, 121-139.
- Mészáros, L. (1998): Late Miocene Soricidae (Mammalia) fauna from Tardosbánya (Western Hungary). – *Hantkeniana*, 2: 103–125.
- Mészáros, L. G. (1999): An exceptionally rich Soricidae (Mammalia) fauna from the upper Miocene localities of Polgárdi (Hungary). – In: *Annales Universitatis Scientiarum Budapestinensis de Rolando Eötvös Nominatae-Sectio Geologica*, 32: 5-34.
- Mészáros, L. (2000): New results for the Late Miocene Soricidae stratigraphy in the Pannonian Basin. – *Newsletters on Stratigraphy*, 1-11.
- Mészáros, L. (2004): Taxonomical revision of the Late Würm *Sorex* (Mammalia, Insectivora) remains of Hungary, for proving the presence of an alpine ecotype in the Pilisszántó Horizon. – *Annales Universitatis Scientiarum Budapestinensis, Sectio Geologica*, 34, 9-25.
- van der Meulen, A. J. (1973): Middle Pleistocene smaller mammals from the Monte Peglia (Orvieto, Italy) with special reference to the phylogeny of *Microtus* (Arvicolidae, Rodentia). – *Quaternaria*, 17, 1-144.

- Minwer-Barakat, R., García-Alix, A., Suárez, E. M., Freudenthal, M. (2010): Soricidae (Soricomorpha, Mammalia) from the Pliocene of Tollo de Chiclana (Guadix Basin, Southern Spain). – *Journal of Vertebrate Paleontology*, 30(2): 535-546.
- Moya-Costa, R., Cuenca-Bescós, G., Rofes, J. (2023): The shrews (Soricidae, Mammalia) of the Early and Middle Pleistocene of Gran Dolina (Atapuerca, Spain): reassessing their paleontological record in the Iberian Peninsula. – *Quaternary Science Reviews*, 309: 108093.
- Pasa, A. (1947): I mammiferi di alcune antiche brecce veronesi. – *La tipografica veronese*, 1, 1-111.
- Pasa, A. (1952): Mammiferi fossili della breccia di Montorio presso Verona. – *Atti dell'Accademia di Agricoltura, Scienze e Lettere di Verona*, 6(2): 1-20.
- Pazonyi, P., Virág, A., Gere, K., Botfalvai, G., Sebe, K., Szentesi, Z., Mészáros, L., Botka, D., Gasparik, M., Korecz, L. (2018): Sedimentological, taphonomical and palaeoecological aspects of the late early Pleistocene vertebrate fauna from the Somssich Hill 2 site (South Hungary). – *Comptes Rendus Palevol*, 17(4-5): 296-309.
- Pazonyi, P., Szentesi, Z., Mészáros, L., Hír, J., Gasparik, M. (2023): Stratigraphic and Paleoecological Significance of the Early/Middle Pleistocene Vertebrate Fauna of the Süttő 21 Site. – *Diversity*, 15(6), 736.
- Petényi, S. J. (1864): Geological and palaeontological description of the Beremend limestone quarry. Posthumous works. – *Magyar Tudományos Akadémia kiadása*, 1: 35–81.
- Popov, V. V. (1984): Small Mammals (Mammalia-Insectivora, Rodentia, Lagomorpha) from Late Pleistocene Deposits in Mecha Dupka Cave (the Western Balkan Mountain). – *Acta zoologica bulgarica*, 24, 35-44.
- Rabeder, G. (1972): Die Insectivoren und Chiropteren (Mammalia) aus dem Altpleistozän von Hundsheim (Niederösterreich). – *Annalen des naturhistorischen Museums in Wien*, 375-474.
- Rabeder, G. (1992): Standard profile and chronology of Nixloch cave sediments. – *Mitteilungen der Kommission für Quartärforschung*, 8, 223-225.
- Rădulescu, C., Samson, P. (1985): Pliocene and Pleistocene mammalian biostratigraphy in southeastern Transsylvania (Romania). – *Travaux de l'Institut de Spéologie "Émile Racovitza"*, 24, 85-95.
- Rădulescu, C., Samson, P. (1992): Chronologie et paléoclimatologie de trois grottes des Carpates Orientales (Roumanie) d'après les Mammifères. 1. Micromammifères. – *Travaux de l'Institut de Spéologie "Émile RACOVITZA"*, 31: 95-104.
- Rathgeber, T. (2004): Die quartäre Tierwelt der Höhlen um Veringenstadt (Schwäbische Alb). – *Laichinger Höhlenfreund*, 39(1), 207-228.
- Reumer, J. W. F. (1984): Ruscinian and early Pleistocene Soricidae (Insectivora, Mammalia) from Tegelen (The Netherlands) and Hungary. – *Scripta Geologica*, 73: 1-173.
- Reumer, J. W. F. (1996): Quaternary Insectivora (Mammalia) from southwestern France. – *Acta zoologica cracoviensia*, 39: 413–426.
- Reumer, J. W. F., Doukas, C. S. (1985): Early Pleistocene insectivora (Mammalia) from Tourkobounia (Athens, Greece). – *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen. Series B. Palaeontology, geology, physics and chemistry*, 88(1), 111-121.
- Roe, H. M., Coope, G. R., Devoy, R. J., Harrison, C. J., Penkman, K. E. H., Preece, R. C., Schreve, D. C. (2009): Differentiation of MIS 9 and MIS 11 in the continental record: vegetational, faunal, aminostratigraphic and sea-level evidence from coastal sites in Essex, UK. – *Quaternary Science Reviews*, 28(23-24): 2342–2373.
- Rofes, J., Cuenca-Bescós, G. (2006): First evidence of the Soricidae (Mammalia) *Asoriculus gibberodon* (Petényi, 1864) in the Pleistocene of north Iberia. – *Rivista Italiana di Paleontologia e Stratigrafia*, 112(2): 301.
- Rutot, A. (1910): Note sur l'existence des couches à Rongeurs arctiques dans les cavernes de la Belgique. – *Hayez*.
- Rzebik-Kowalska, B. (1981): The Pliocene and Pleistocene Insectivora (Mammalia) of Poland. IV. Soricidae: *Neomysorex* ng and *Episoriculus* Ellerman et Morrison-Scott, 1951. – *Acta zoologica cracoviensia*, 25(8): 227-250.

- Rzebik-Kowalska, B. (1982). Insectivora. – In: Kozłowski, J.K. (ed.), Excavation in the Bacho Kiro Cave, pp. 39-40. Państwowe Wydawnictwo Naukowe, Warszawa.
- Rzebik-Kowalska, B. (1988): Soricidae (Mammalia, Insectivora) from the Plio-Pleistocene and Middle Quaternary of Morocco and Algeria. – *Folia Quaternaria*, 57, 51-90.
- Rzebik-Kowalska, B. (1991): Pliocene and Pleistocene Insectivora (Mammalia) of Poland. VIII. Soricidae: *Sorex* Linnaeus, 1758, *Neomys* Kaup, 1829, *Macroneomys* Fejfar, 1966, *Paenelimnoecus* Baudelot, 1972 and Soricidae indeterminata. – *Acta zoologica cracoviensia*, 34(2).
- Rzebik-Kowalska, B. (1994): Pliocene and Quaternary Insectivora (Mammalia) of Poland. – *Acta zoologica cracoviensia*, 37(1).
- Rzebik-Kowalska, B. (2000): Insectivora (Mammalia) from the Early and early Middle Pleistocene of Betfia in Romania. I. Soricidae Fischer von Waldheim, 1817. – *Acta zoologica cracoviensia*, 43(1): 1-53.
- Rzebik-Kowalska, B. (2002): The Pliocene and Early Pleistocene Lipotyphla (Insectivora, Mammalia) from Romania. – *Acta zoologica cracoviensia*, 45(2), 251-281.
- Rzebik-Kowalska, B. (2006): Erinaceomorpha and Soricomorpha (Mammalia) from the late Pleistocene and Holocene of Krucza Skała rock shelter and Komarowa cave (Poland). – *Acta Zoologica Cracoviensia-Series A: Vertebrata*, 49(1-2): 83-118.
- Rzebik-Kowalska, B. (2008): Insectivores (Soricomorpha, Mammalia) from the Pliocene and Pleistocene of Transbaikalia and Irkutsk region (Russia). – *Quaternary International*, 179(1): 96–100.
- Rzebik-Kowalska, B. (2013): *Sorex bifidus* n. sp. and the rich insectivore mammal fauna (Erinaceomorpha, Soricomorpha, Mammalia) from the Early Pleistocene of Żabia Cave in Poland. – *Palaeontologia Electronica*, 16(2/12A): 1-35.
- Rzebik-Kowalska, B., Popov, V. V. (2005): Bulgaria. – In: van den Hoek Ostende, L. W., Doukas, C. S., Reumer, J. W. F. (eds), The Fossil Record of the Eurasian Neogene Insectivores (Erinaceomorpha, Soricomorpha, Mammalia), Part I. *Scripta Geologica Special Issue 5*, pp. 31-35.
- Rzebik-Kowalska, B., Rekovets, L. I. (2016): New data on Eulipotyphla (Insectivora, Mammalia) from the Late Miocene to the Middle Pleistocene of Ukraine. – *Palaeontologia Electronica*, 19(1): 1-31.
- Sala, B. (1990): Loess fauna in deposits of shelters and caves in the Veneto region and examples in other regions of Italy. – In: Cremaschi, M. (ed.), The loess in Northern and Central Italy. *Quaderni di Geodinamica Alpina e Quaternaria*, 1, pp. 139-149.
- Samson, P., Rădulescu, C. (1972): Découverte de dépôts à faune mindélienne dans les grottes de la Dobrogea centrale. – *Travaux de l'Institut de Spéologie "Émile RACOVITZA"*, 11, 317-326.
- Sarasin, K. F., Stehlin, H. G. (1924): Die Magdalénien-Station bei Ettingen (Baselland). – *Kommissionsverlag Fretz*.
- Sesé, C. (1994): Paleoclimatic interpretation of the Quaternary small mammals of Spain. – *Geobios*, 27, 753–767.
- Sesé, C., Villa, P. (2008): Micromammals (rodents and insectivores) from the early Late Pleistocene cave site of Bois Roche (Charente, France): Systematics and paleoclimatology. – *Geobios*, 41(3): 399-414.
- Schaefer, H. (1975a): Die Spitzmause der Hohen Tatra seit 30 000 Jahren (Mandibular-Studie). – *Zoologische Anzeiger*, 195(1-2): 89–111.
- Sickenberg, O. (1939): Die Insektenfresser, Fledermäuse und Nagetiere der Höhlen von Goyet (Belgien). – *Bulletin de l'Institut royal des Sciences Naturelles de Belgique*, 15(19): Brusel.
- Siori, M. S., Boero, A., Carnevale, G., Colombero, S., Delfino, M., Sardella, R., Pavia, M. (2014): New data on Early Pleistocene vertebrates from Monte Argentario (Central Italy), Paleoecological and biochronological implications. – *Geobios*, 47(6), 403-418.

- Stampfli, H. R. (1959): Die Tierfunde (Säugetiere und Vögel) (Die Kastel-höhle). – Jahrbuch für Solothurnische Geschichte 32, Magdalénienstation Lausnitz.
- Storch, G. (1978): Die turoliche Wirbeltierfauna von Dorn-Dürkheim, Rheinhessen (SW-Deutschland). 2. Mammalia: Insectivora. – *Senckenbergiana lethaea*, 58(6), 421-449.
- Stuart, A. J. (1995): Insularity and Quaternary vertebrate faunas in Britain and Ireland. – Geological Society, London, Special Publications, 96(1): 111–125.
- Terzea, E. (1971): Les Micromammifères quaternaires de deux grottes des Carpates roumaines. – *Travaux de l'Institut de Spéologie "Émile RACOVITZA"*, 10: 279–300.
- Terzea, E. (1974): Les mammifères quaternaires de la grotte "Peștera Bursucilor" et quelques remarques sur les dipodidés. – *Travaux de l'Institut de Spéologie "Émile RACOVITZA"*, 13, 105-116.
- Terzea, E. (1994): Fossiliferous sites and the chronology of mammal faunas at Betfia (Bihor Romania). – *Travaux du Museum National d'Histoire Naturelle "Grigore Antipa"*, 34: 467-485.
- Tesakov, A. S., Simakova, A. N., Frolov, P. D., Sytchevskaya, E. K., Syromyatnikova, E. V., Foronova, I. V., Shalaeva, E. A., Trifonov, V. G. (2019): Early-Middle Pleistocene environmental and biotic transition in NW Armenia, southern Caucasus. – *Quaternary International*, 509: 20-34.
- Topachevsky, V. A. (1961): Novyi Pliotsenovykh vid vykhukholi iz predkavkazya. – *Paleontologicheskij Zhurnal*, 4: 131–137.
- Vasileiadou, K., Konidaris, G., Koufos, G. D. (2012): New data on the micromammalian locality of Kessani (Thrace, Greece) at the Mio-Pliocene boundary. – *Palaeobiodiversity and Palaeoenvironments*, 92(2): 211-237.
- Vervoort-Kerkhoff, Y., van Kolfschoten, T. (1988): Pleistocene and Holocene mammalian faunas from the Maasvlakte near Rotterdam (The Netherlands). – *Mededelingen van de Werkgroep voor Tertiaire en Kwartaire Geologie*, 25(1): 87-98.
- van de Weerd, A., Reumer, J. W., de Vos, J. (1982): Pliocene mammals from the Apolakkia formation (Rhodes, Greece). – *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen, Series B*, 85(1): 89–112.
- Wilczyński, J., Miękina, B., Lipecki, G., Lõugas, L., Marciszak, A., Rzebik-Kowalska, B., Stworzewicz, E., Szyndlar, Z., Wertz, K. (2012): Faunal remains from Borsuka Cave – an example of local climate variability during Late Pleistocene in southern Poland. – *Acta zoologica cracoviensia*, 55(2), 131–155.
- Zaitsev, M. V., Baryshnikov, G. F. (2002): Pleistocene Soricidae (Lipotyphla, Insectivora, Mammalia) from Treugolnaya Cave, Northern Caucasus, Russia. – *Acta zoologica cracoviensia*, 45(2): 283-305.
- Zaitsev, M. V., Osipova, V. A. (2004): Insectivorous mammals (Insectivora) of the late Pleistocene in the northern Caucasus. – *Zoologicheskii zhurnal*, 83(7): 851-868.
- Ziegler, R., Daxner-Höck, G. (2005): Austria. – In: van den Hoek Ostende, L. W., Doukas, C. S., Reumer, J. W. F. (eds), *The Fossil Record of the Eurasian Neogene Insectivores (Erinaceomorpha, Soricomorpha, Mammalia)*, Part I. *Scripta Geologica Special Issue 5*, pp. 11-29.
- Ziegler, R., Dahlmann, T., Reumer, J. W. F., Storch, G. (2005): Germany. – In: van den Hoek Ostende, L. W., Doukas, C. S., Reumer, J. W. F. (eds), *The fossil record of the Eurasian Neogene insectivores (Erinaceomorpha, Soricomorpha, Mammalia)*, Part I. *Scripta Geologica Special Issue 5*, pp. 61-98.