

Annexes

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Tab.1: Overview of research plots within Nature reserve

Name of Nature Reserve	Amount of target plots	No. of partial target plot
Smrk	4	7, 31, 32, 35
Bučací potok	1	12
Studenčany	1	6
V Podolánkách	1	19

Tab.2: Evaluation of forest soil quality by Šály 1978, Rejšek 1999, Sánka, Materna 2004

Soil reaction	Extremely acid	Very heavily acid	Heavily acid	Acid
pH (H ₂ O)	< 3.5	3.5–4.5	4.5–5.5	5.5–6.5
pH (KCl)	< 3.0	3.0–4.0	4.0–5.0	5.0–6.0
Sorption complex	very low, low	medium	high (very high)	
T (mmol·kg ⁻¹)	(< 80) 80–130	130–240	240–300 (> 300)	
S (mmol·kg ⁻¹)	< 120	120–180	> 180	
Sorption complex saturation	very low, low	medium	Higher	high (very high)
V (%)	(< 5) 15–30	30–50	50–70	70–85 (>85)
Content of available nutrients*	very low, insufficient	optimum	excessive (very high)	
P (mg·kg ⁻¹)	(< 5) 5–10	10–30	30–60 (> 60)	
Mg (mg·kg ⁻¹)	(< 20) 20–40	40–60	60–80 (> 80)	
Ca (mg·kg ⁻¹)	(< 150) 150–300	300–500	500–800 (> 800)	
K (mg·kg ⁻¹)	(< 20) 20–50	50–90	90–140 (> 140)	

*Criteria of the evaluation of available nutrients are determined according to analyses using the procedure of Mehlich II, III.

Tab.3: Overview of research localities and site characteristics

Locality	FST	VAZ	EC	Altitude	Tree	pH/KCL	Cat. pH/KCL	Al3-	Ca ²⁺	Ca ²⁺ Category	Mg ²⁺	Mg ²⁺ Category	K ⁺	K ⁺ Category	Soil type
1	5Y	5	Y	580	SM	2,80	A	12,40	191,00	A	46,00	A	112,00	B	Leptosols (RN)
2	5F	5	F	800	BK	3,50	B	2,61	205,00	A	52,00	A	62,00	A	Leptosols (RN)
3	5S	5	S	870	BK	3,47	B	2,63	236,00	A	62,00	B	102,00	B	entic Podzols (KP)
4	5S	5	S	880	SM	3,02	B	7,25	192,00	A	51,00	A	111,00	B	haplic Podzols (PZ)
5	5S	5	S	850	BK	3,32	B	2,09	177,00	A	62,00	B	118,00	B	haplic Podzols (PZ)
6	5B	5	B	900	BK	4,29	C	1,11	216,00	A	49,00	A	79,00	A	Cambisols (KA)
7	5A	5	A	820	BK	3,75	B	1,64	279,00	A	64,00	B	118,00	B	Leptosols (RN)
8	6S	6	S	1000	SM	2,99	A	7,99	181,00	A	52,00	A	79,00	A	haplic Podzols (PZ)
9	6S	6	S	1030	SM	2,74	A	10,80	229,00	A	57,00	A	106,00	B	Cambisols (KA)
10	5S	5	S	840	SM	3,15	B	11,12	214,00	A	50,00	A	75,00	A	Leptosols (RN)
11	5F	5	F	860	SM	2,95	B	9,44	182,00	A	46,00	A	74,00	A	Leptosols (RN)
12	5F	5	F	800	BK	3,31	B	7,40	557,00	C	87,00	C	137,00	B	entic Podzols (KP)
13	5F	5	F	850	SM	2,78	B	6,98	222,00	A	57,00	A	108,00	B	Leptosols (RN)
14	5B	5	B	820	SM	3,41	B	10,08	258,00	A	64,00	B	115,00	B	Cambisols (KA)
15	5Y	5	Y	790	SM	4,43	C	1,09	643,00	C	480,00	C	175,00	C	Leptosols (RN)
16	5Y	5	Y	800	SM	3,11	B	6,22	350,00	B	112,00	C	120,00	B	Leptosols (RN)
17	5L	5	L	590	SM	3,07	B	13,33	175,00	A	59,00	A	110,00	B	Fluvisols (FL)
18	5L	5	L	600	SM	3,13	B	11,89	169,00	A	53,00	A	85,00	A	Fluvisols (FL)
19	6O	6	O	630	SM	3,03	B	0,73	233,00	A	49,00	A	98,00	B	Gleysols (GL)
21	5B	5	B	720	BK	3,95	B	2,47	479,00	B	102,00	C	221,00	C	Cambisols (KA)
22	5B	5	B	680	SM	2,97	A	7,53	170,00	A	48,00	A	85,00	A	Cambisols (KA)
23	6O/R	6	O/R	540	SM	3,77	B	7,60	230,00	A	46,00	A	77,00	A	Histosols (OR)
24	6O	6	O	540	SM	3,34	B	23,49	220,00	A	47,00	A	79,00	A	Stagnosols (PG)
25	5A	5	A	850	BK	4,11	C	1,76	278,00	A	65,00	B	100,00	B	entic Podzols (KP)
26	5A	5	A	850	SM	3,00	A	10,70	267,00	A	70,00	B	108,00	B	Leptosols (RN)
27	6S	6	S	1000	BK	3,18	B	7,86	410,00	B	93,00	C	163,00	C	Cambisols (KA)
28	6S	6	S	1020	BK	3,29	B	9,56	479,00	B	153,00	C	191,00	C	Cambisols (KA)
29	4Y	4	Y	600	SM	3,05	B	8,00	258,00	A	50,00	A	81,00	A	Leptosols (RN)
30	4S	4	S	620	SM	2,98	A	9,73	175,00	A	41,00	A	64,00	A	Cambisols (KA)
31	6S	6	S	1100	SM	2,74	A	12,86	242,00	A	79,00	B	155,00	C	Cambisols (KA)
32	7S	7	S	1190	SM	3,14	B	7,72	161,00	A	49,00	A	151,00	C	Leptosols (RN)
33	7S	7	S	1210	SM	2,79	A	12,61	164,00	A	46,00	A	119,00	B	haplic Podzols (PZ)
34	6S	6	S	1090	SM	3,00	A	7,36	256,00	A	82,00	C	177,00	C	haplic Podzols (PZ)
35	4S	4	S	620	BK	4,04	C	1,37	222,00	A	51,00	A	142,00	C	Cambisols (KA)
36	5S	5	S	640	SM	3,09	B	10,41	220,00	A	82,00	C	102,00	B	Cambisols (KA)
37	5S	5	S	630	SM	2,87	A	9,66	216,00	A	69,00	B	119,00	B	Cambisols (KA)
38	4S	4	S	620	SM	3,12	B	8,01	311,00	B	98,00	C	144,00	C	haplic Podzols (PZ)

Tab.4: Dominance of Lumbricidae in VAZ

VAZ	<i>Allobophora eiseni</i>	<i>Aporrectodea rosea</i>	<i>Dendrobaena attemsi</i>	<i>Dendrobaena octaedra</i>	<i>Dendrobaena vejdoovskyi</i>	<i>Dendrodriilus rubidus</i>	<i>Dendrodriilus rubidus tenuis</i>	<i>Eisenia lucens</i>	<i>Eiseniella tetraedra tetraedra</i>	<i>Lumbricus rubellus</i>	<i>Octolasion lacteum</i>	<i>Octolasion tyrtaeum</i>
4	x	6,49	16,23	62,99	x	5,84	x	8,44	x	x	x	x
5	0,08	x	17,23	74,00	0,55	4,78	0,08	2,74	x	0,39	0,08	0,08
6	x	0,33	8,82	45,42	x	2,29	x	32,35	5,88	0,33	x	4,58
7	3,57	x	3,57	89,29	x	x	x	3,57	x	x	x	x

Tab.5: Dominance of Lumbricidae in EC

EC	<i>Allobophora eiseni</i>	<i>Aporrectodea rosea</i>	<i>Dendrobaena attemsi</i>	<i>Dendrobaena octaedra</i>	<i>Dendrobaena vejdoovskyi</i>	<i>Dendrodriilus rubidus</i>	<i>Dendrodriilus rubidus tenuis</i>	<i>Eisenia lucens</i>	<i>Eiseniella tetraedra tetraedra</i>	<i>Lumbricus rubellus</i>	<i>Octolasion lacteum</i>	<i>Octolasion tyrtaeum</i>
A	0,58	x	15,20	72,51	0,58	4,68	x	4,09	x	2,34	x	x
B	x	x	18,99	65,19	2,53	9,49	x	3,80	x	x	x	x
F	x	x	21,97	66,56	x	8,85	0,33	2,30	x	x	x	x
L	x	x	28,07	64,91	0,88	0,88	x	2,63	x	0,88	0,88	0,88
O	x	x	6,90	68,97	x	x	x	24,14	x	x	x	x
O/R	x	1,05	x	14,74	x	4,21	x	46,32	18,95	x	x	14,74
S	0,17	1,75	4,89	80,45	0,17	1,05	x	11,34	x	0,17	x	x
Y	x	x	29,55	64,26	x	5,50	x	9,00	x	x	x	x

Tab.6: Dominance of Lumbricidae in FST

FST	<i>Allobophora eiseni</i>	<i>Aporrectodea rosea</i>	<i>Dendrobaena attemsi</i>	<i>Dendrobaena octaedra</i>	<i>Dendrobaena vej dovskiji</i>	<i>Dendrodriilus rubidus</i>	<i>Dendrodriilus rubidus tenuis</i>	<i>Eisenia lucens</i>	<i>Eiseniella tetraedra tetraedra</i>	<i>Lumbricus rubellus</i>	<i>Octolasion lacteum</i>	<i>Octolasion tyrtaeum</i>
4S	x	8,77	1,75	76,32	x	1,75	x	11,40	x	x	x	x
4Y	x	x	57,50	25,00	x	17,50	x	0,00	x	x	x	x
5A	0,58	x	15,20	72,51	0,58	4,68	x	4,09	x	2,34	x	x
5B	x	x	18,99	65,19	2,53	9,49	x	3,80	x	x	x	x
5F	x	x	21,97	66,56	x	8,85	0,33	2,30	x	x	x	x
5L	x	x	28,07	64,91	0,88	0,88	x	2,63	x	0,88	0,88	0,88
5S	x	x	0,72	94,96	0,36	0,36	x	3,60	x	x	x	x
5Y	x	x	25,10	70,52	x	3,59	x	0,80	x	x	x	x
6O	x	x	6,90	68,97	x	x	x	24,14	x	x	x	x
6O/R	x	1,05	x	14,74	x	4,21	x	46,32	18,95	x	x	14,74
6S	x	x	15,03	55,56	x	1,96	x	26,80	x	0,65	x	x
7S	3,57	x	3,57	89,29	x	x	x	3,57	x	x	x	x

Tab.7: Total representation of Lumbricidae

Total representation	<i>Allobophora eiseni</i>	<i>Aporrectodea rosea</i>	<i>Dendrobaena attemsi</i>	<i>Dendrobaena octaedra</i>	<i>Dendrobaena vej dovskiji</i>	<i>Dendrodriilus rubidus</i>	<i>Dendrodriilus rubidus tenuis</i>	<i>Eisenia lucens</i>	<i>Eiseniella tetraedra tetraedra</i>	<i>Lumbricus rubellus</i>	<i>Octolasion lacteum</i>	<i>Octolasion tyrtaeum</i>
Total representation (ex)	2	11	273	1206	7	77	1	148	18	6	1	15
Total representation (%)	0,11	0,62	15,47	68,33	0,40	4,36	0,06	8,39	1,02	0,34	0,06	0,85

Tab.8: Genera representatiton of Elateridae larvae

	<i>Athous</i>	<i>Ctenicera</i>	<i>Dalopius</i>	<i>Denticollis</i>	<i>Limonius</i>
Total representation (ex)	469	14	49	7	8
Total representation (%)	85,74	2,56	8,96	1,28	1,46
Average size (cm)	1,13	0,94	1,23	1,06	0,76
Maximal size (cm)	1,94	1,29	2,53	1,43	1,05
Minimal size (cm)	0,41	0,64	0,59	0,68	0,46

Tab.9: Elateridae larvae size categories

	<i>Athous</i>	<i>Ctenicera</i>	<i>Dalopius</i>	<i>Denticollis</i>	<i>Limonius</i>	In total (ex)
Size category A (ex)	130	7	13	3	5	158
Size category B (ex)	240	7	23	3	3	276
Size category C (ex)	99	0	13	1	0	113
In total (ex)	469	14	49	7	8	547

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Fig.4: Abundance of Symphyla in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

Fig.5: Abundance of Diplura in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

Fig.6: Abundance of Protura in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

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Fig.9: Abundance of Staphylinidae adults in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

Fig.10: Projection of the variables to the factor-plane (1 x 2) for Lumbricidae

Fig.11: Abundance of Lumbricidae in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

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Fig.13: Abundance of Elateridae larvae in VAZ a), EC b), FST c), pH/KCL d), Mg²⁺ f), K⁺ g)

Fig.14: Tullgren

Fig.1: Abundance of Acari in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e),
Mg²⁺ f), K⁺ g)

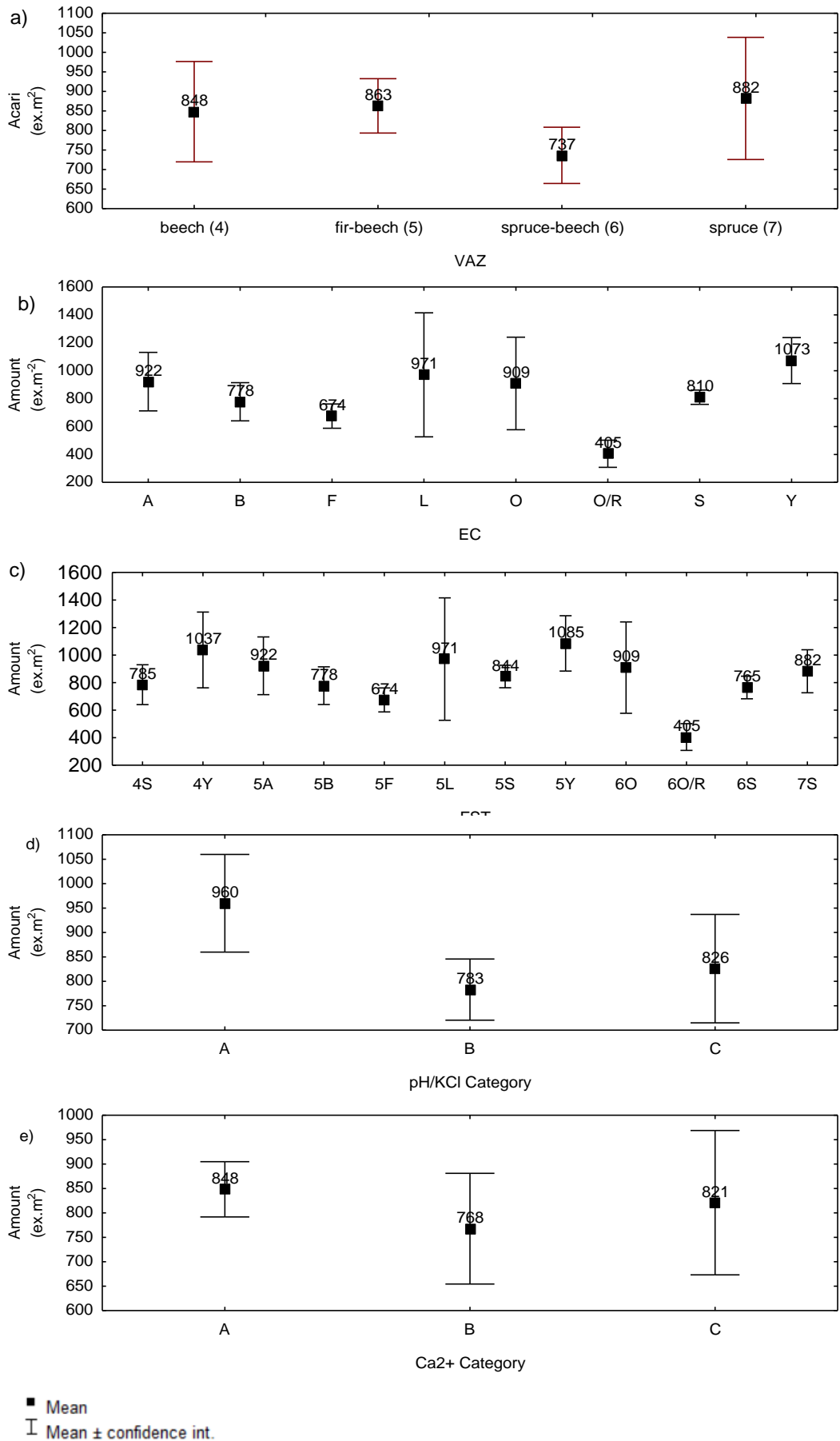


Fig.1(cont.): Abundance of Acari in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

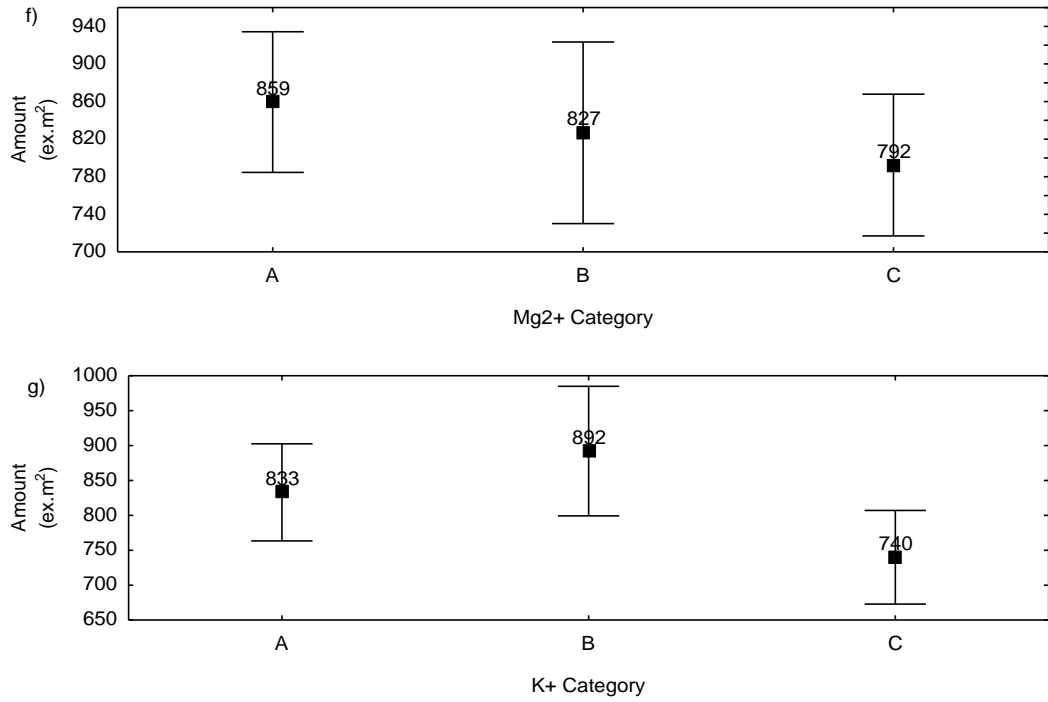


Fig.2: Abundance of Collembola in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

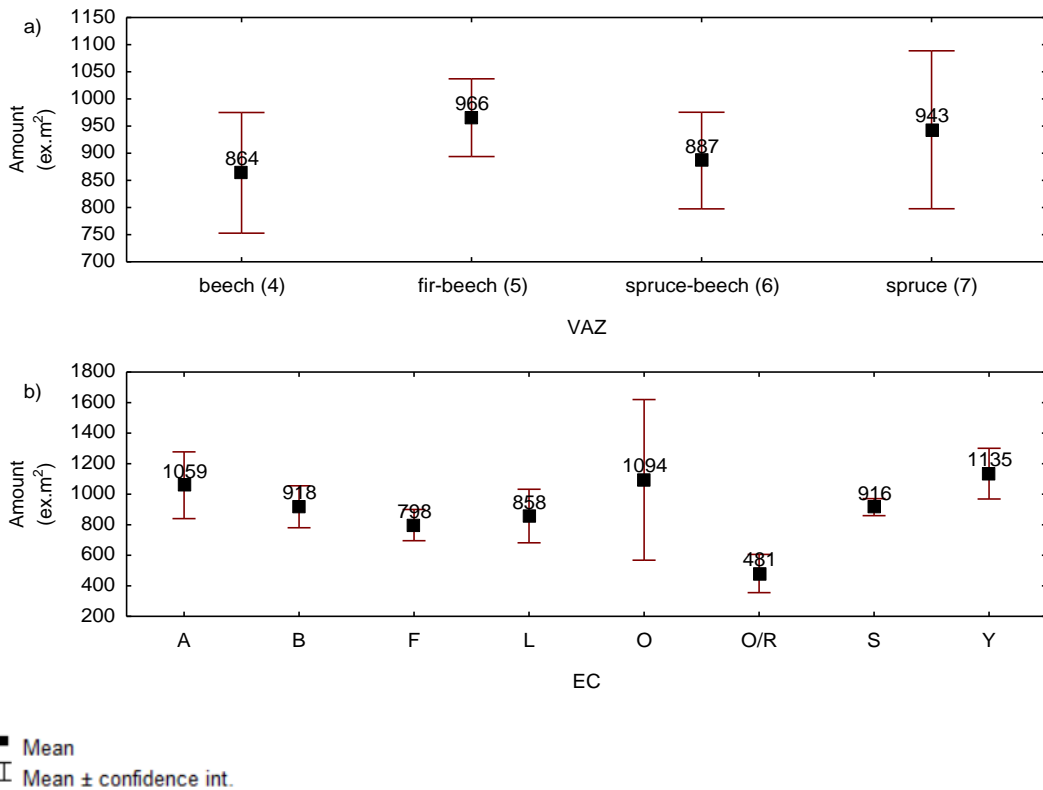


Fig.2(cont.): Abundance of Collembola in VAZ a), EC b), FST c), pH/KCl d),
 Ca^{2+} e), Mg^{2+} f), K^+ g)

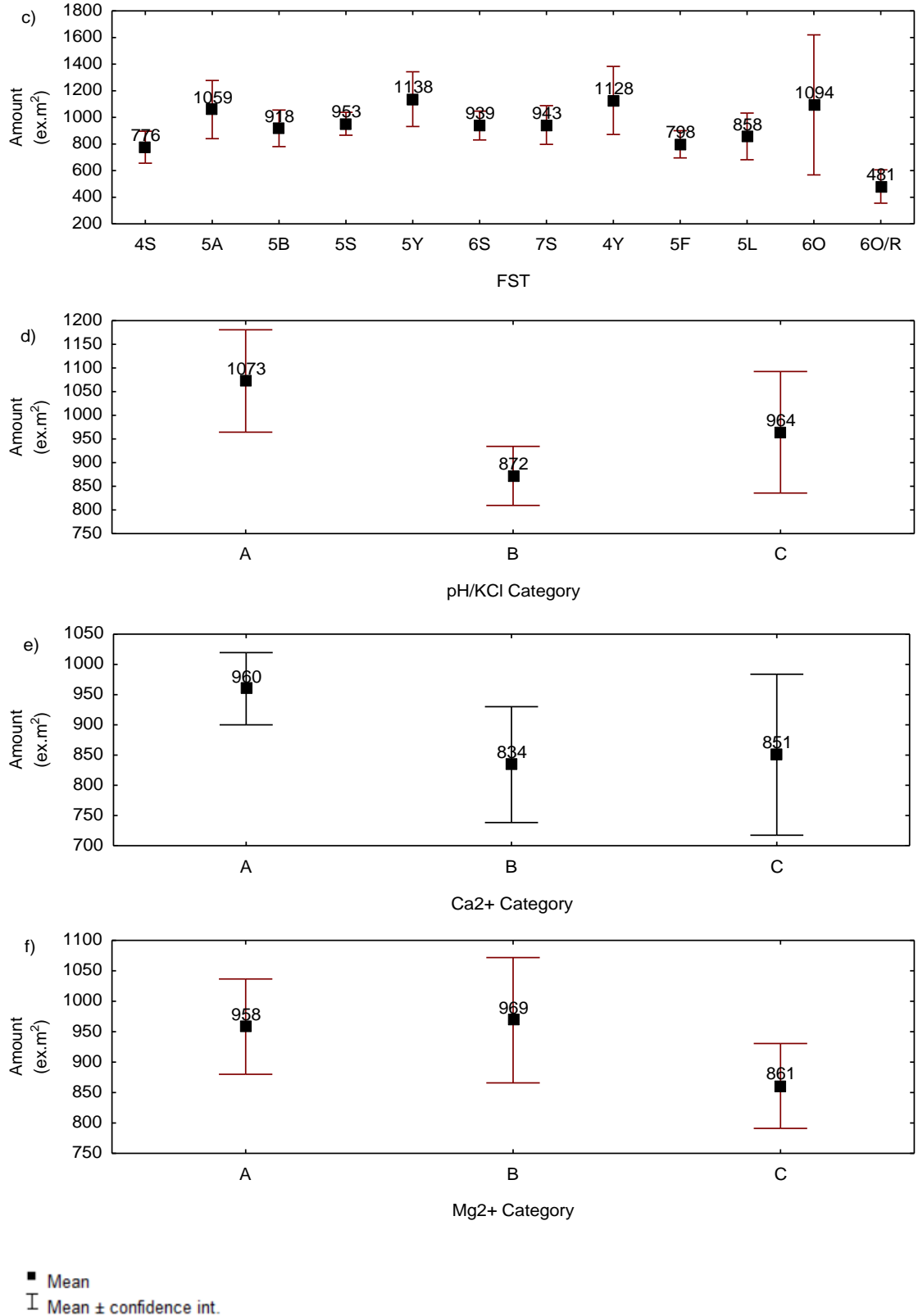


Fig.2(cont.): Abundance of Collembola in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

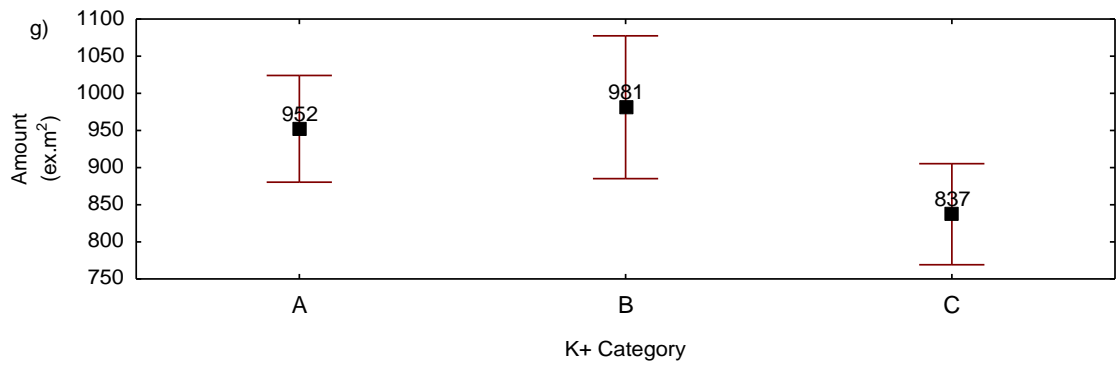
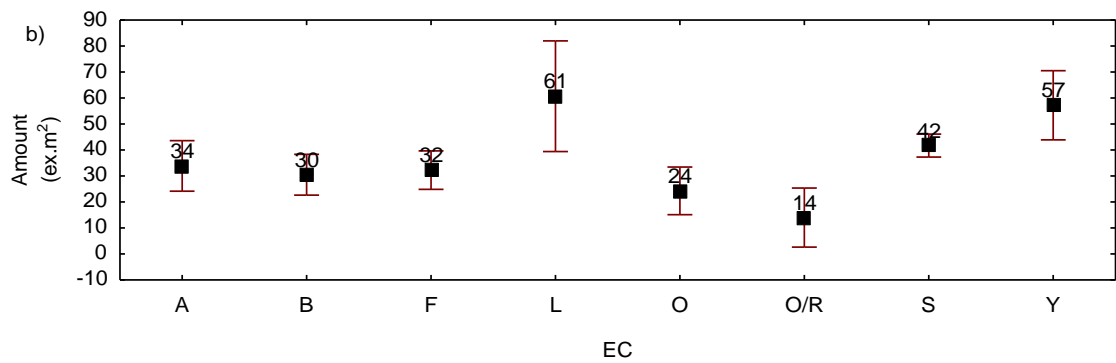
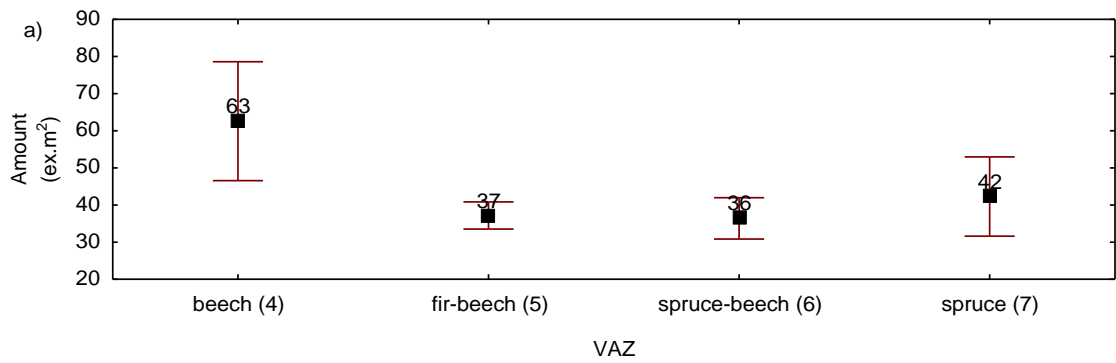


Fig.3: Abundance of Carabidae larvae in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.3(cont.): Abundance of Carabidae larvae in VAZ a), EC b), FST c), pH/KCl d), Ca^{2+} e), Mg^{2+} f), K^+ g)

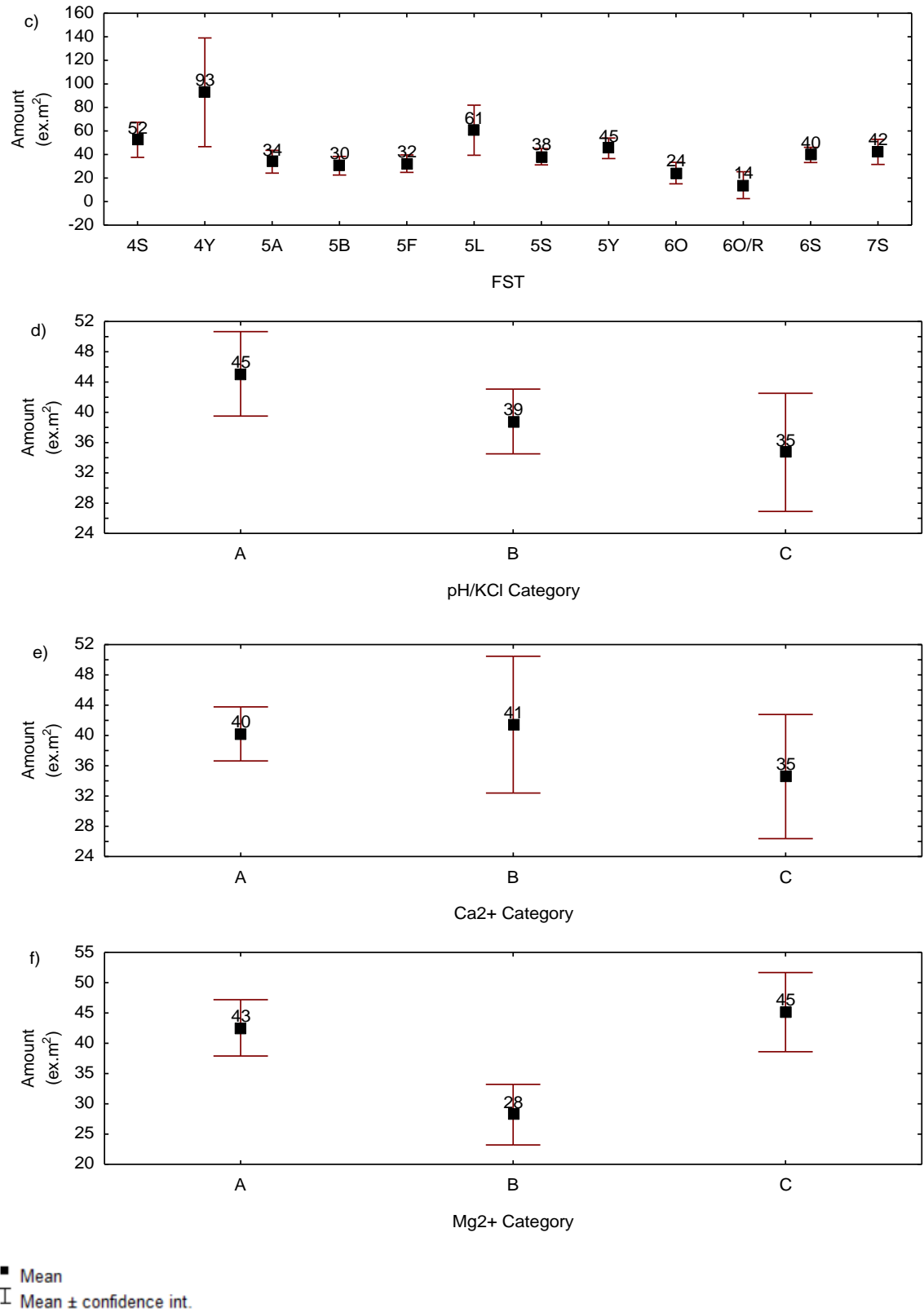


Fig.3(cont.): Abundance of Carabidae larvae in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

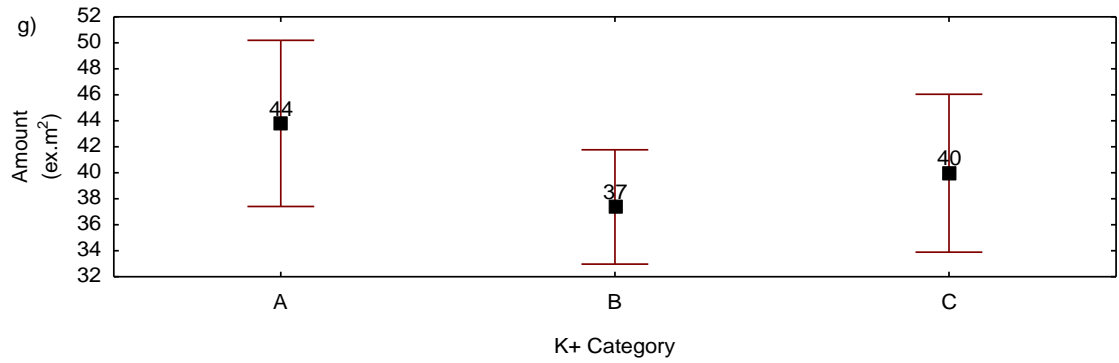
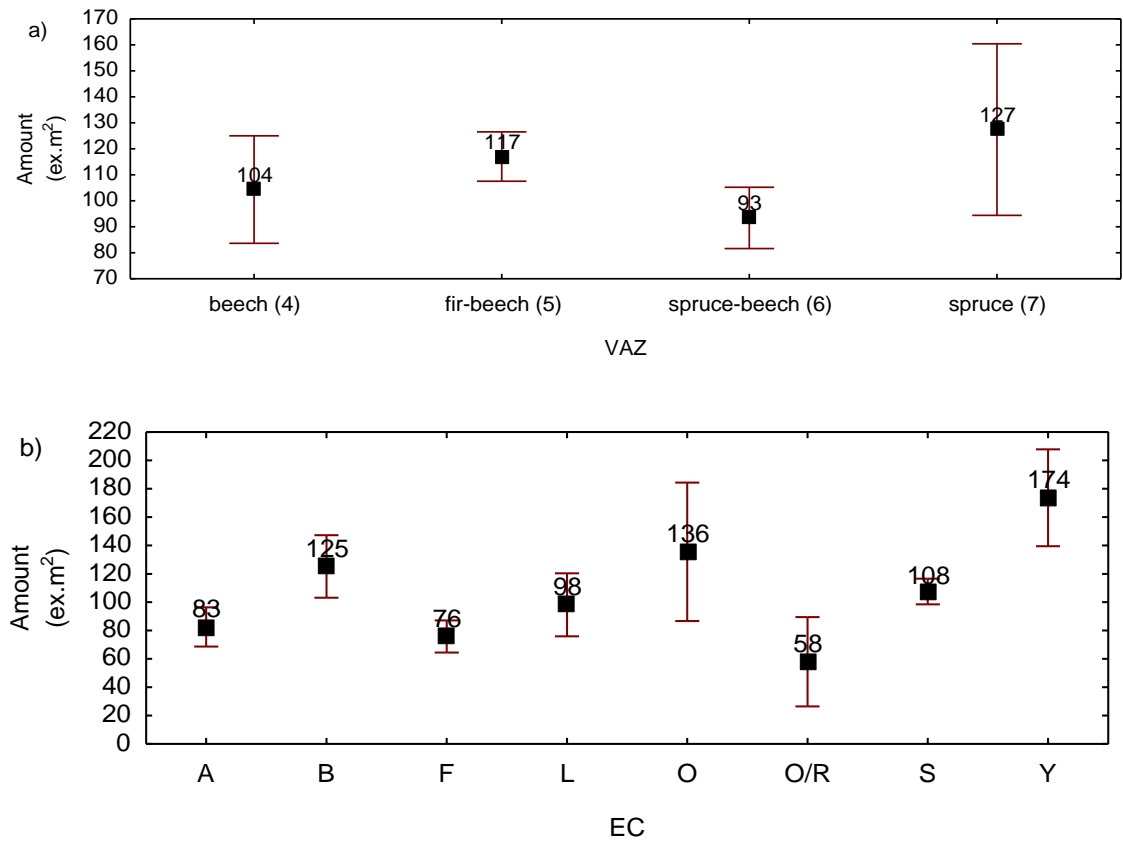
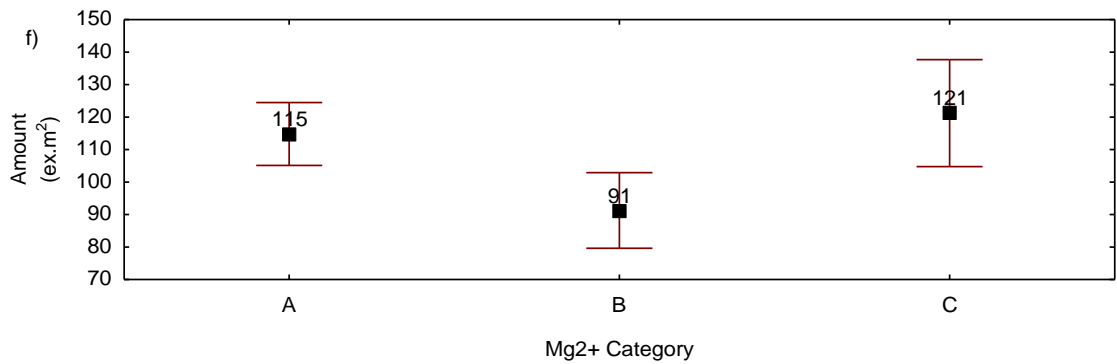
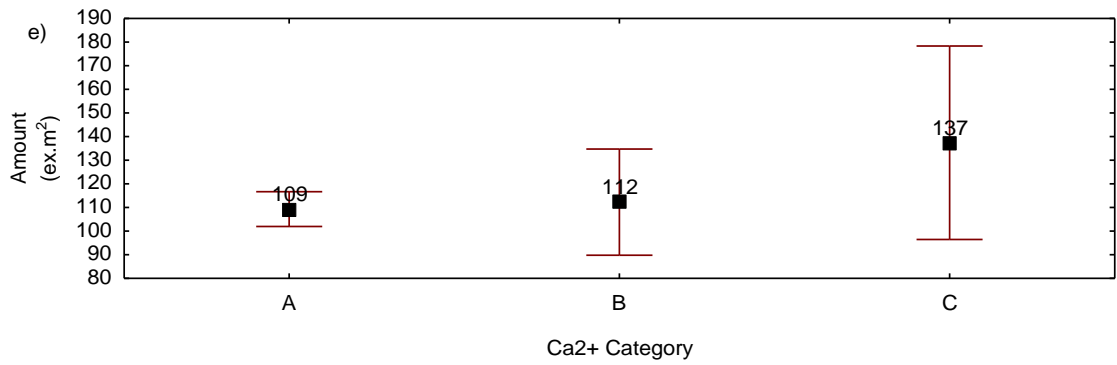
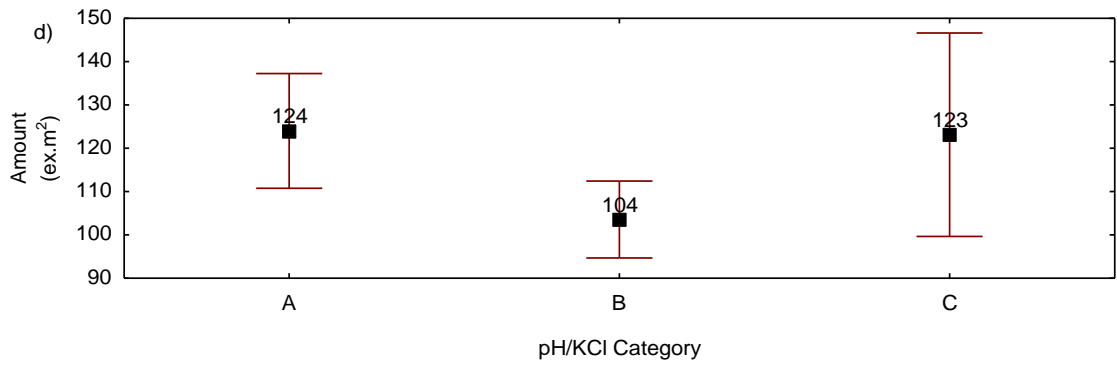
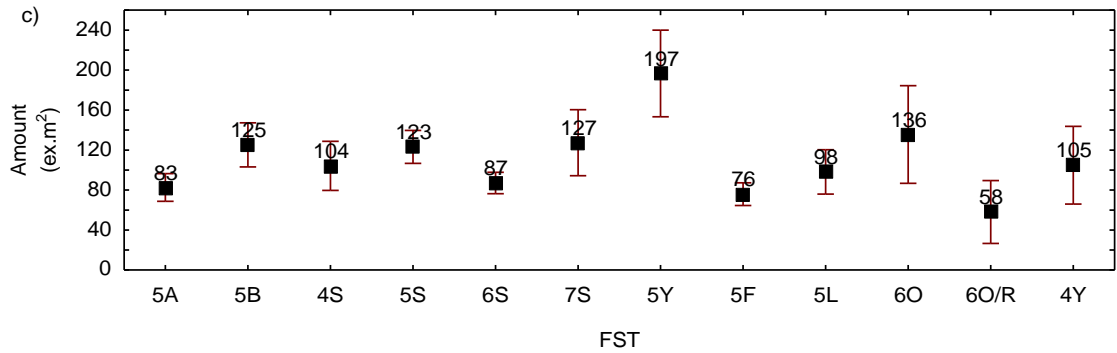


Fig.4: Abundance of Symphyla in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
I Mean ± confidence int.

Fig.4(cont.): Abundance of Symphyla in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.4(cont.): Abundance of Symphyla in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

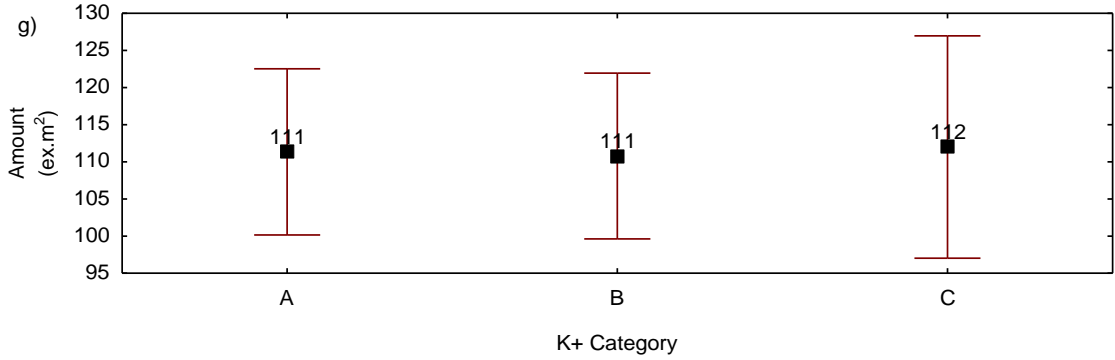
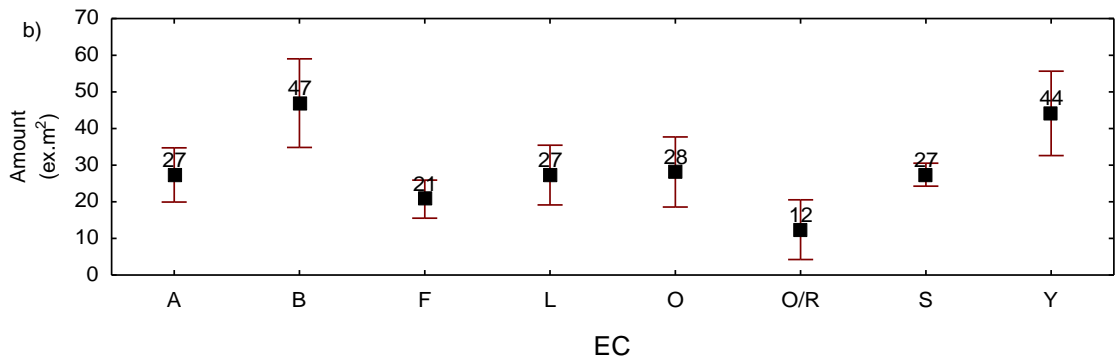
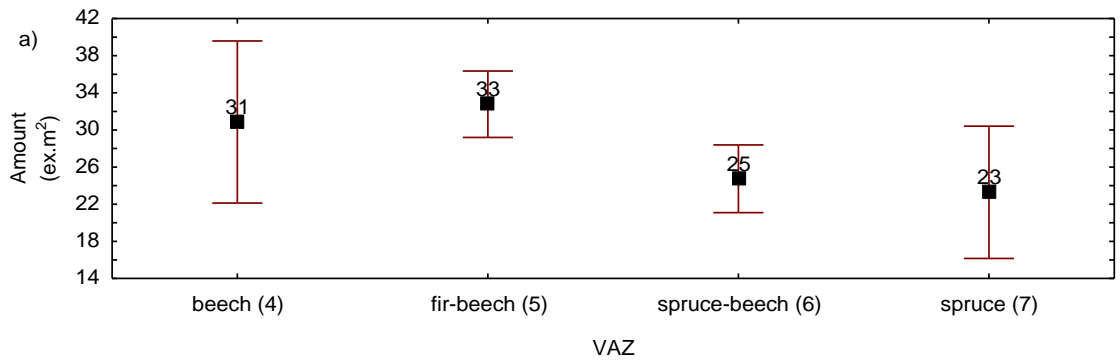
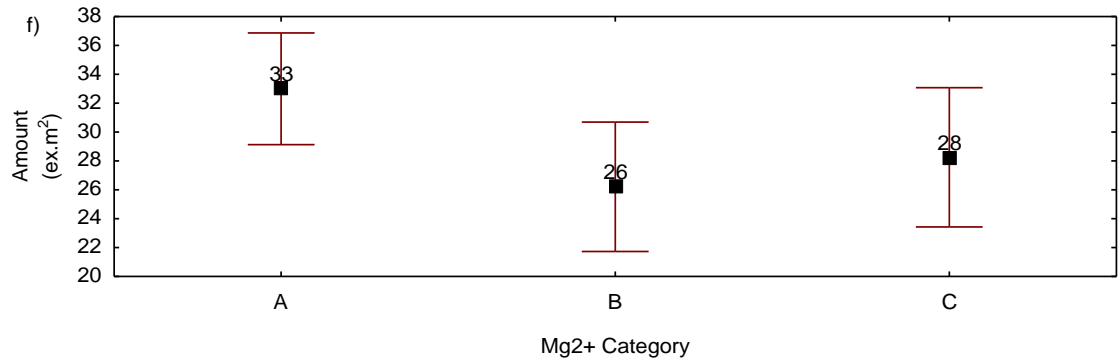
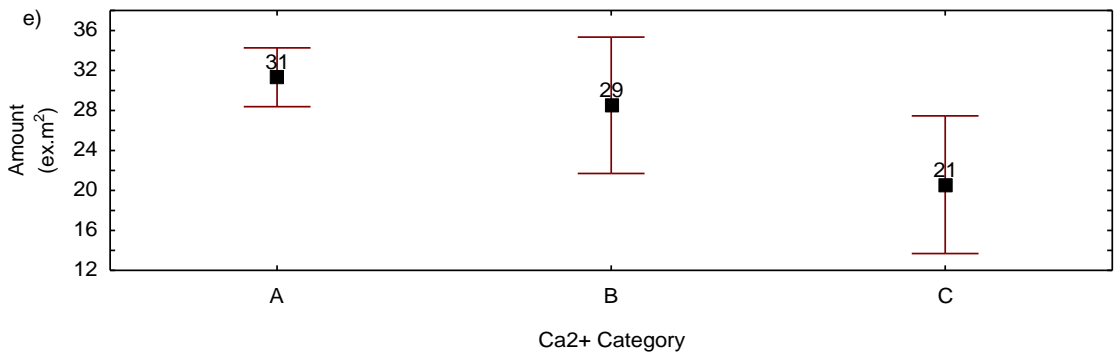
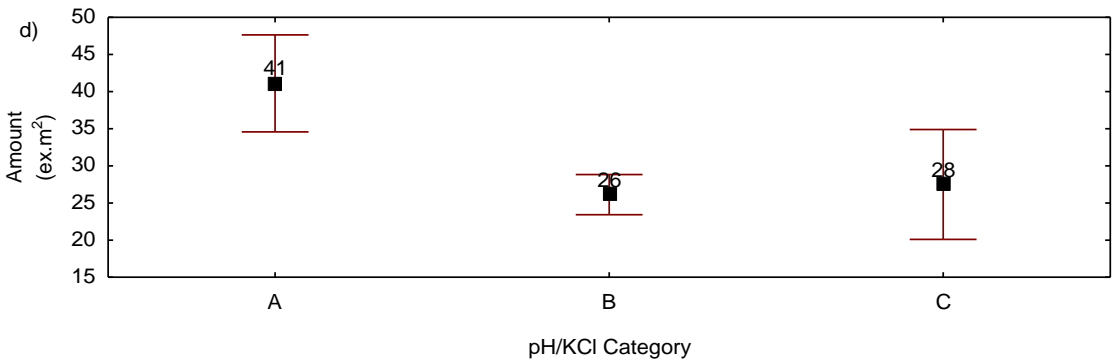
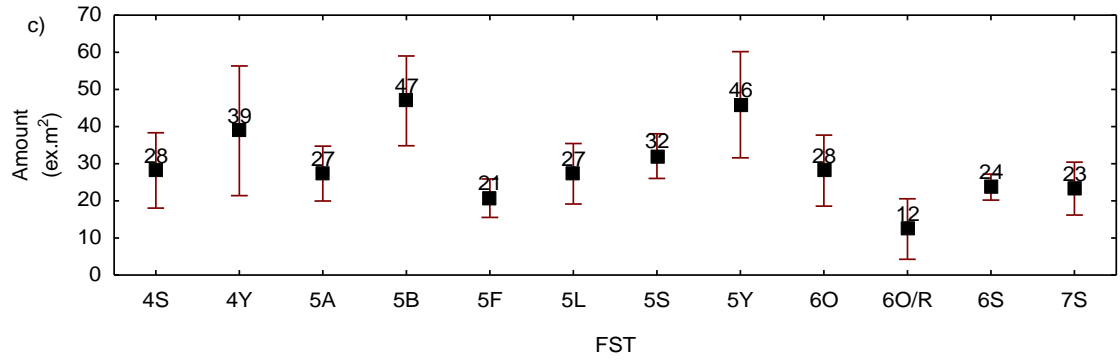


Fig.5: Abundance of Diplura in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
I Mean ± confidence int.

Fig.5 (cont): Abundance of Diplura in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.5 (cont): Abundance of Diplura in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

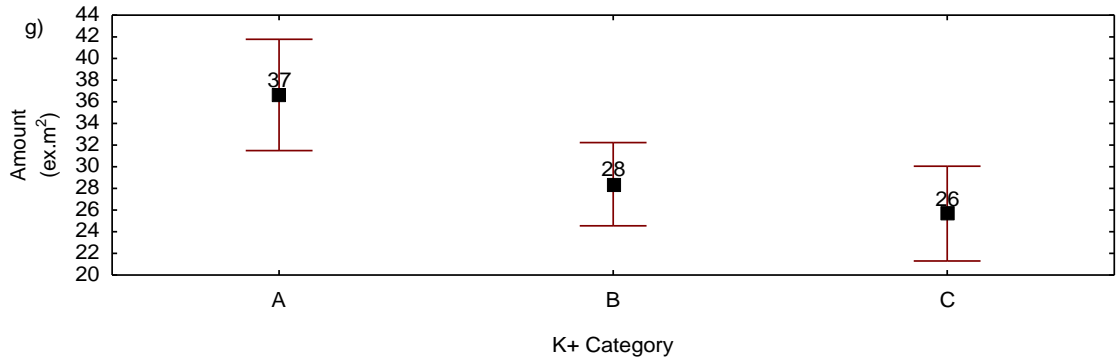
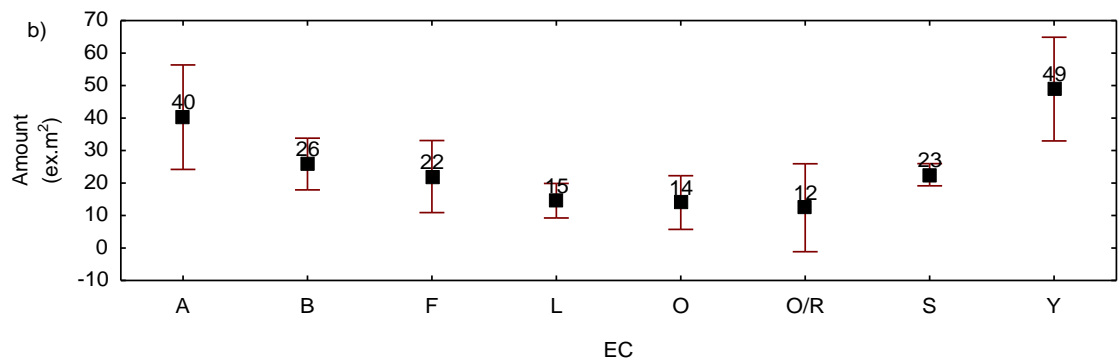
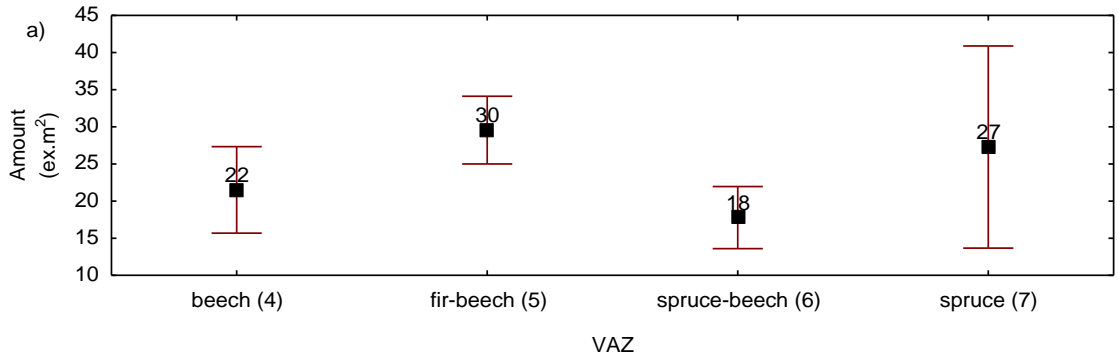
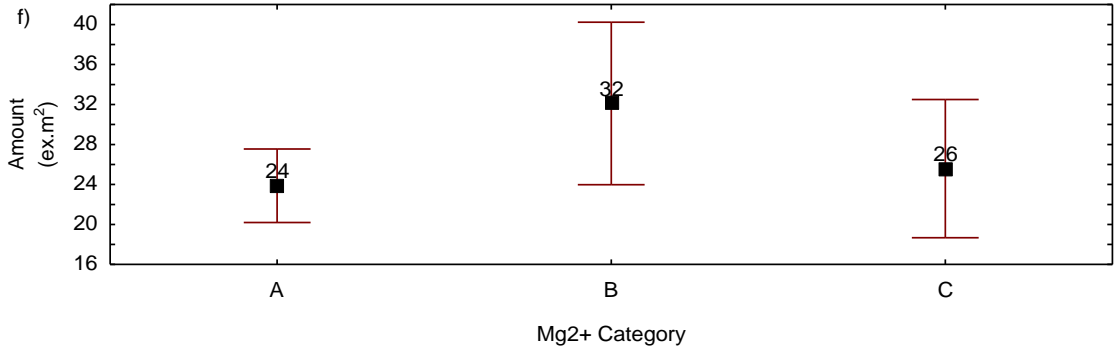
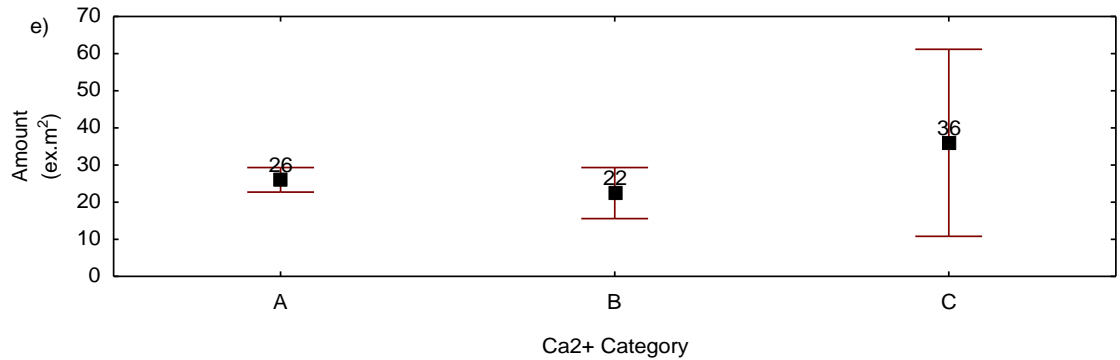
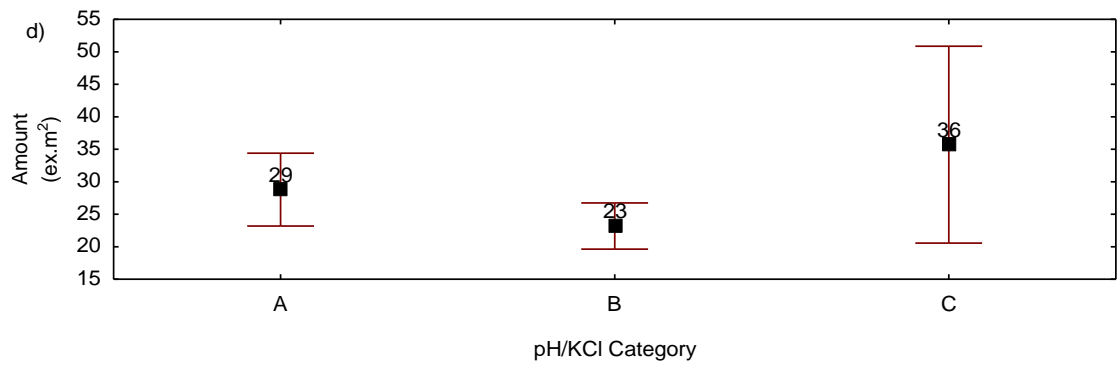
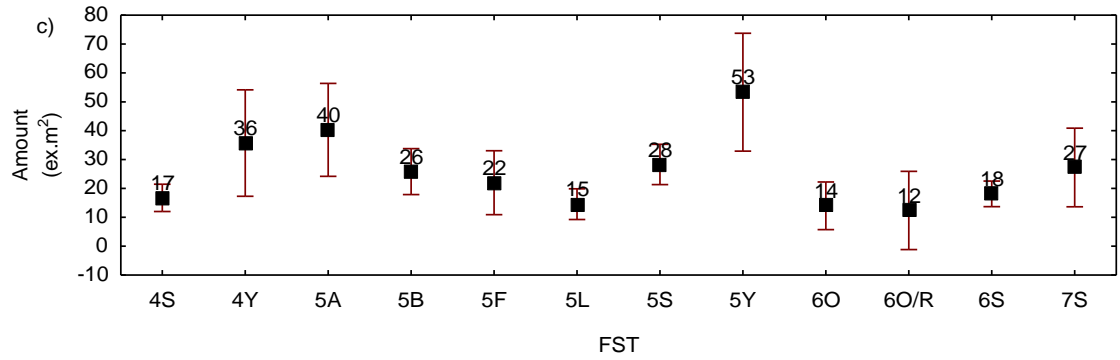


Fig.6: Abundance of Protura in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.6(cont.): Abundance of Protura in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
I Mean ± confidence int.

Fig.6(cont.): Abundance of Protura in VAZ a), EC b), FST c), pH/KCl d),
Ca²⁺ e), Mg²⁺ f), K⁺ g)

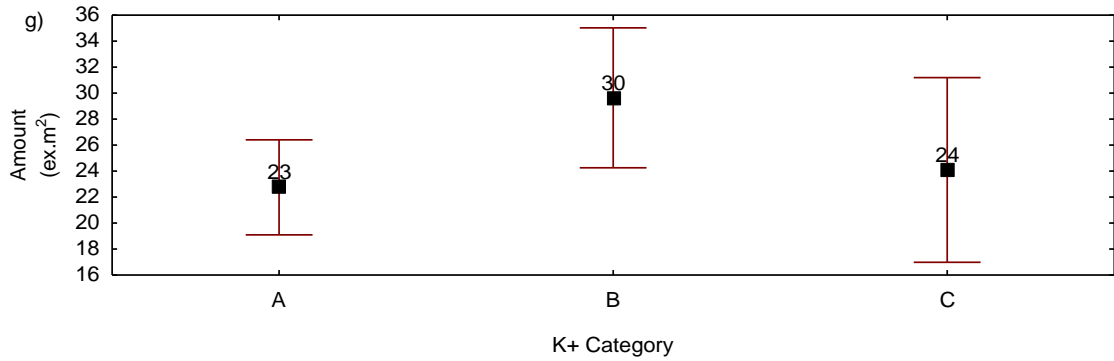
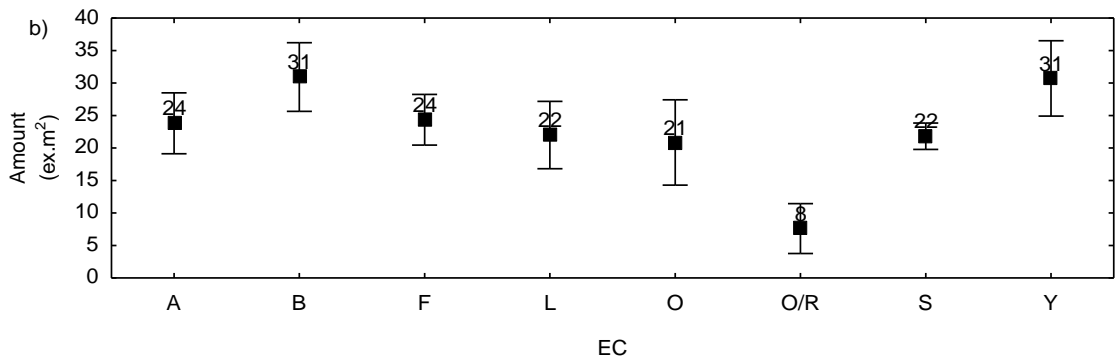
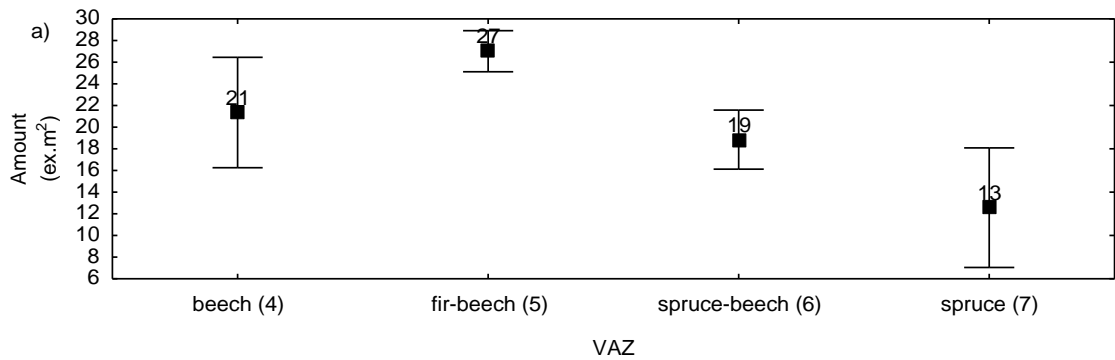
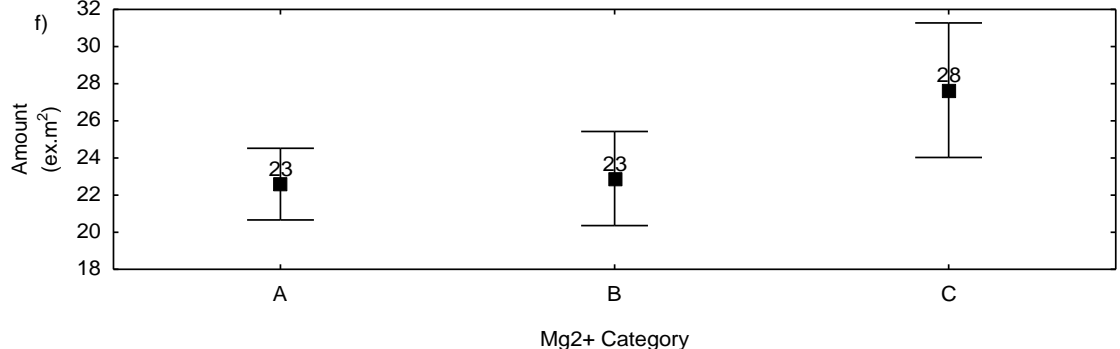
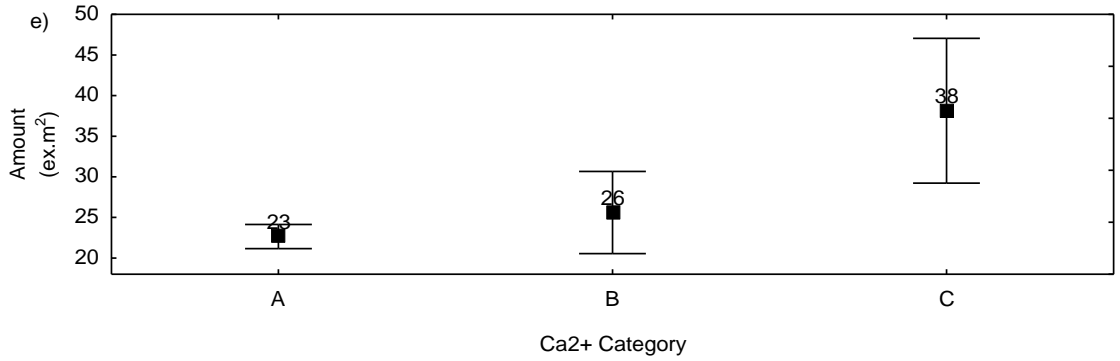
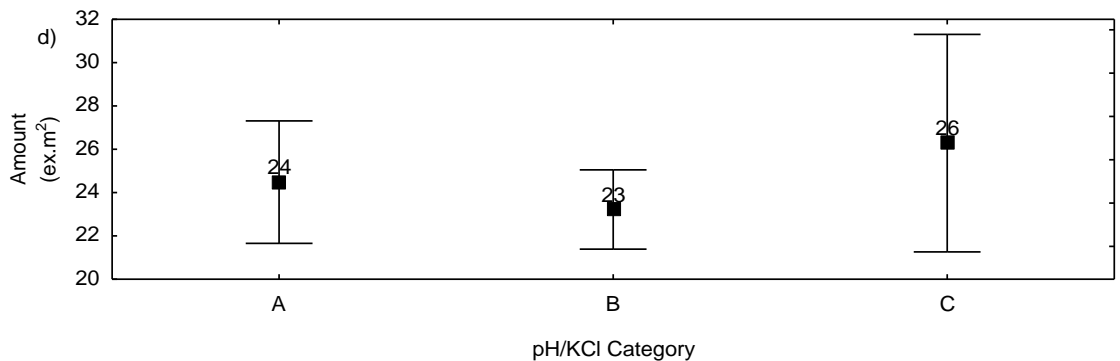
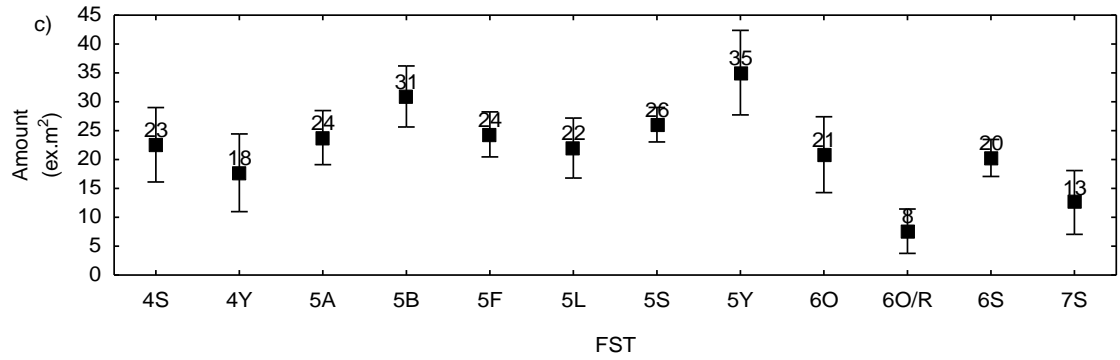


Fig.7: Abundance of Chilopoda, Diplopoda in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.7 (cont.): Abundance of Chilopoda, Diplopoda in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.7 (cont.): Abundance of Chilopoda, Diplopoda in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

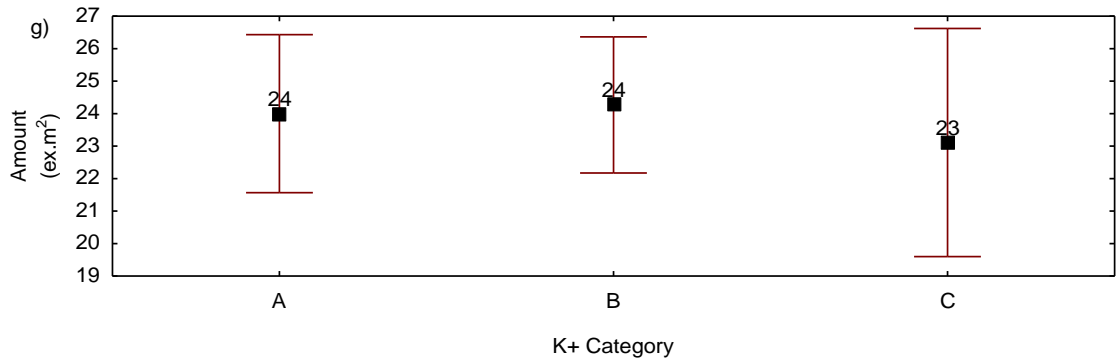
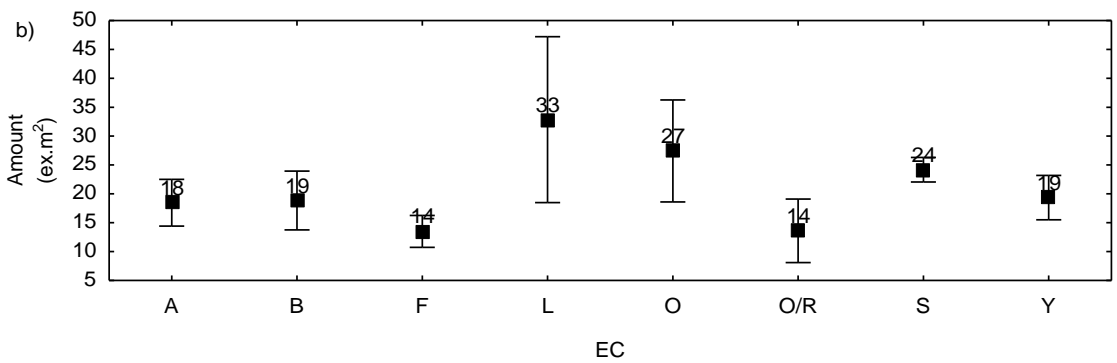
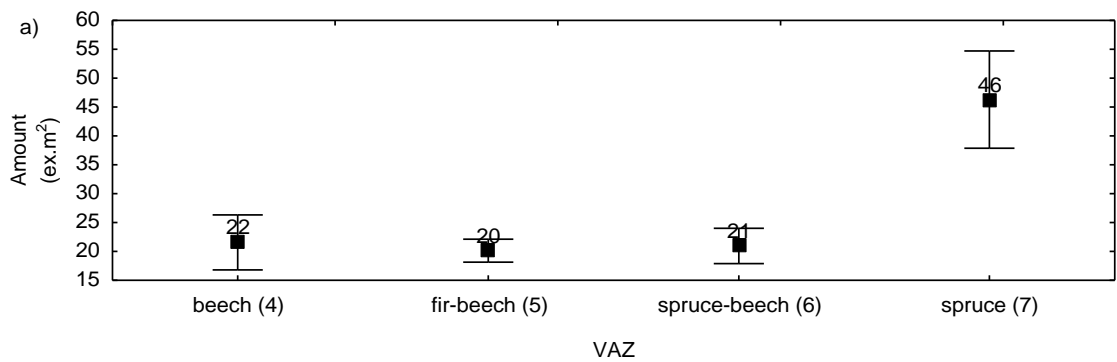
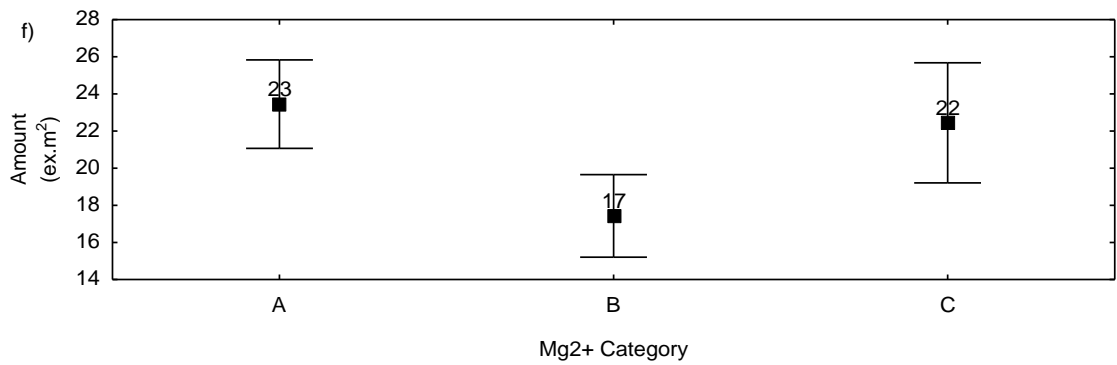
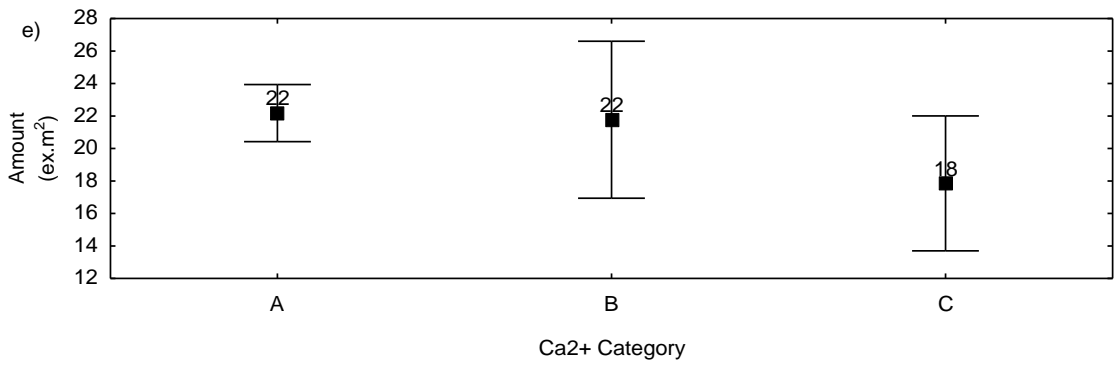
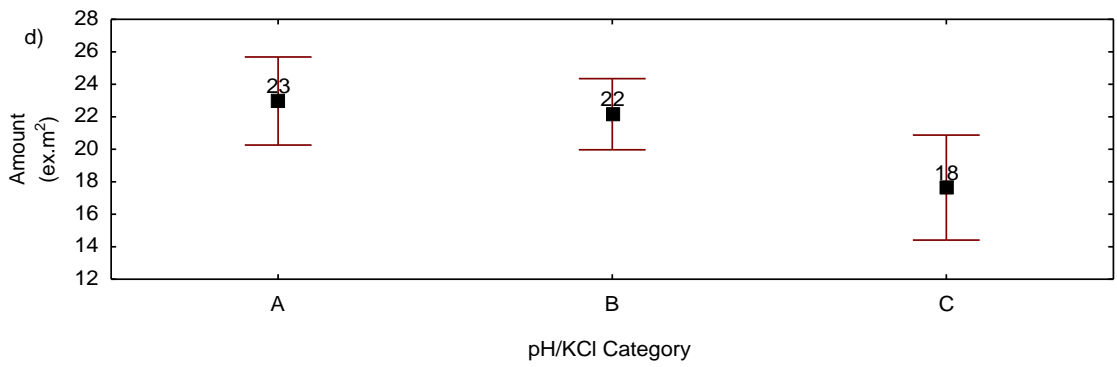
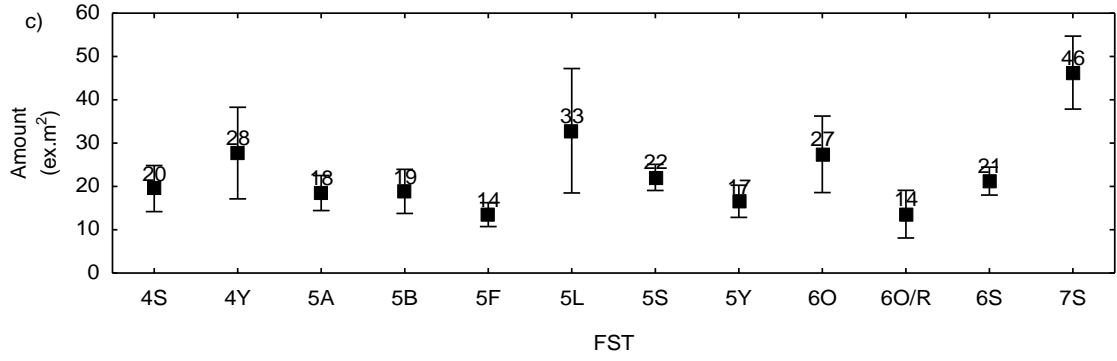


Fig.8: Abundance of Staphylinidae larvae in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.8 (cont.): Abundance of Staphylinidae larvae in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 ┆ Mean ± confidence int.

Fig.8 (cont.): Abundance of Staphylinidae larvae in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

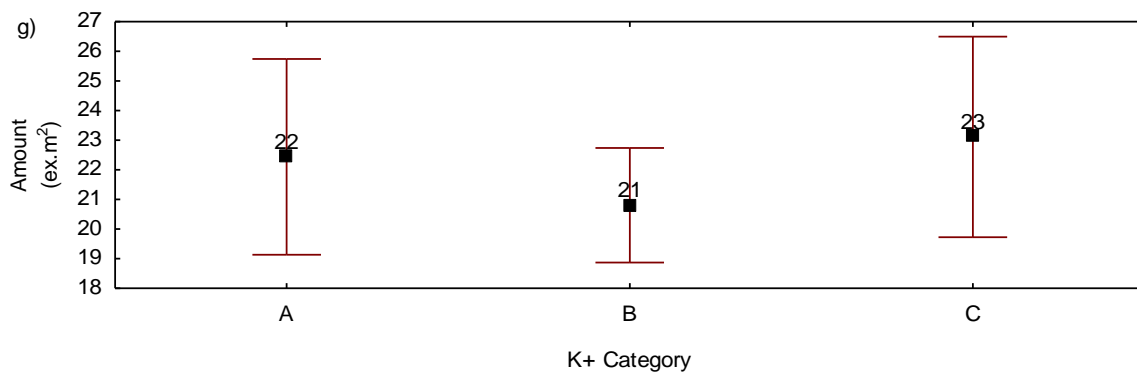
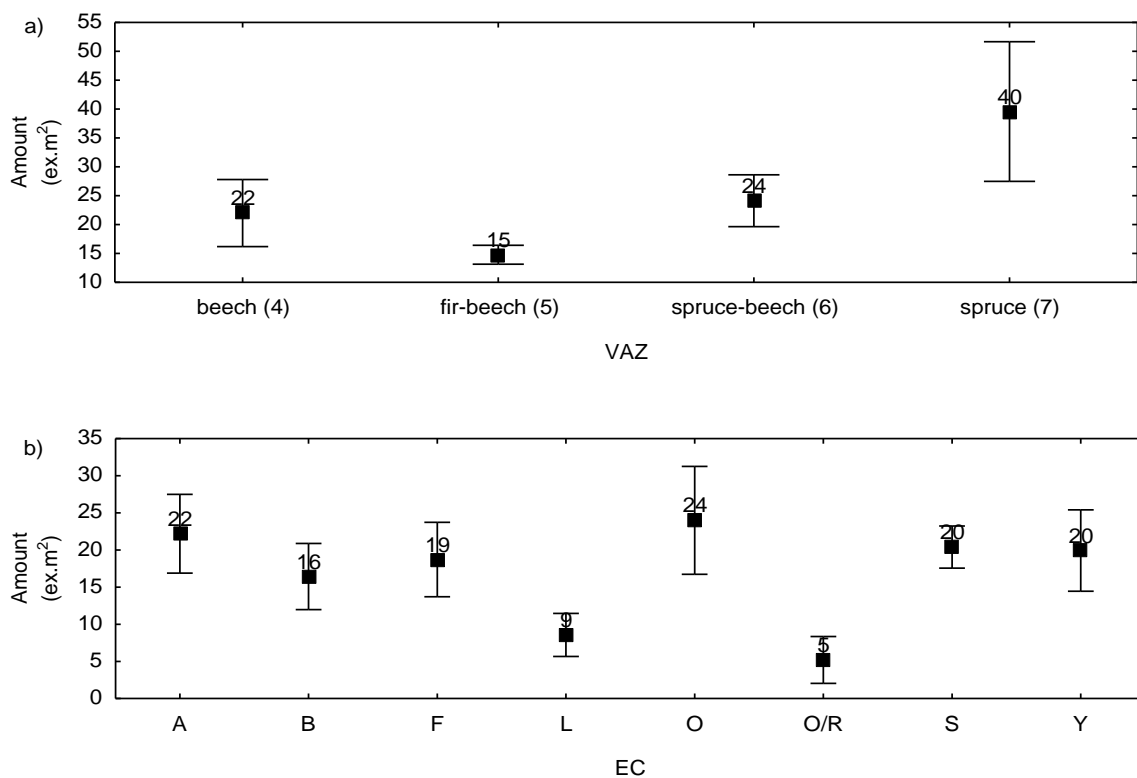
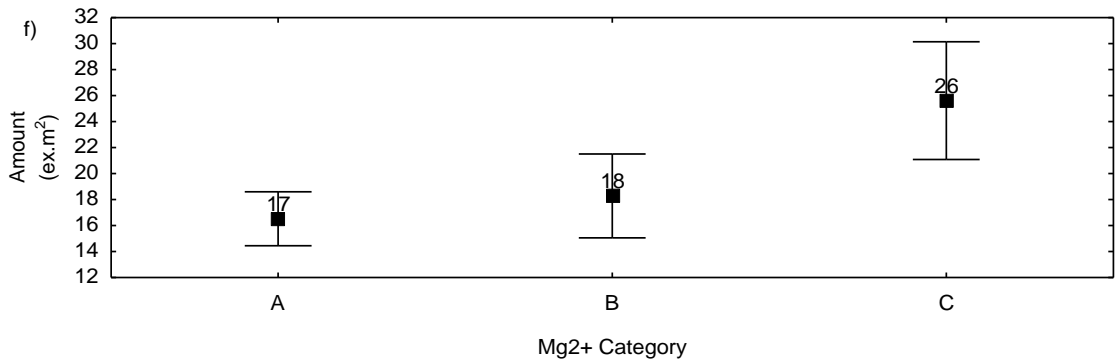
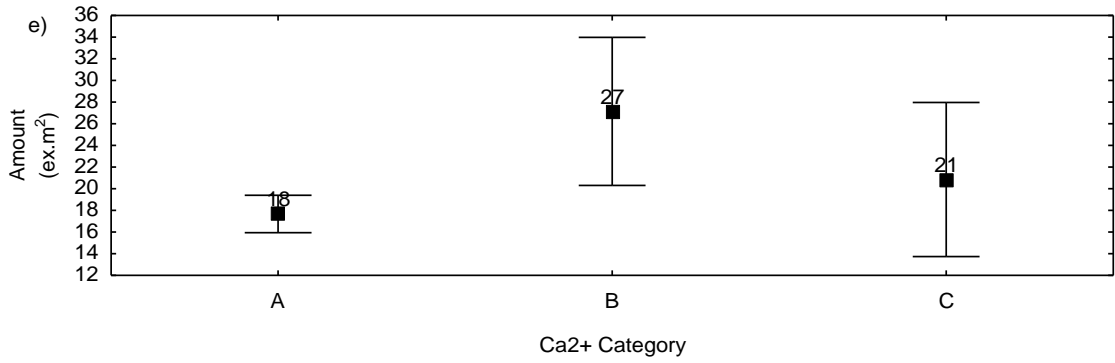
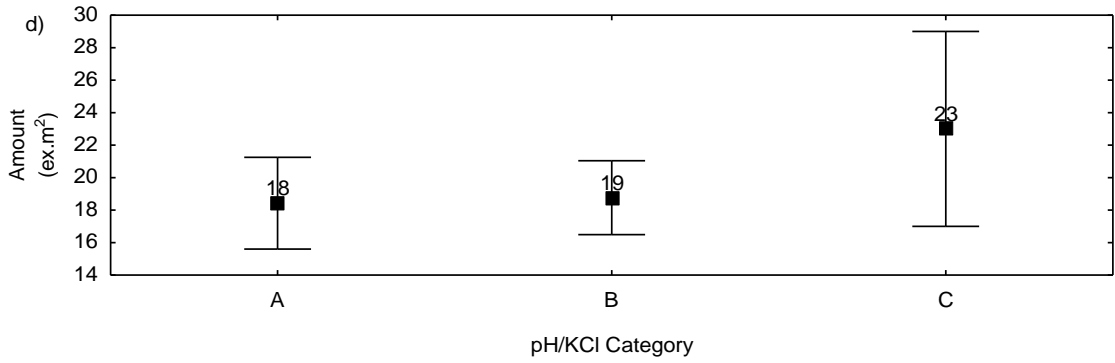
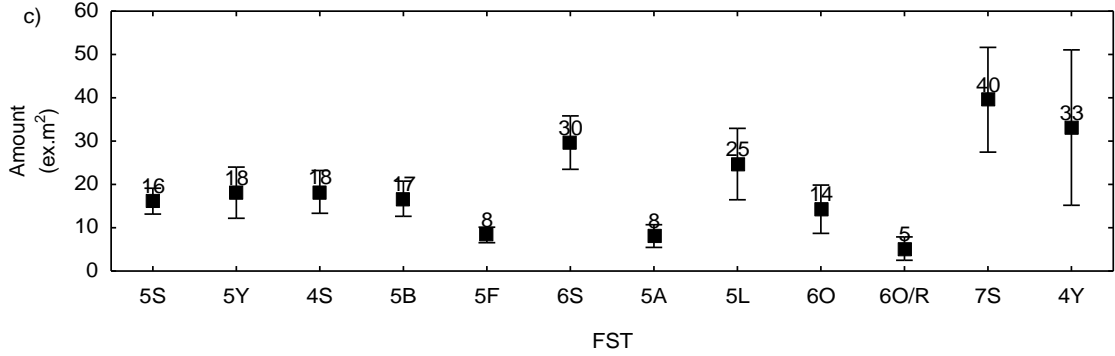


Fig.9: Abundance of Staphylinidae adults in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 ┆ Mean ± confidence int.

Fig.9 (cont.): Abundance of Staphylinidae adults in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.9 (cont.): Abundance of Staphylinidae adults in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

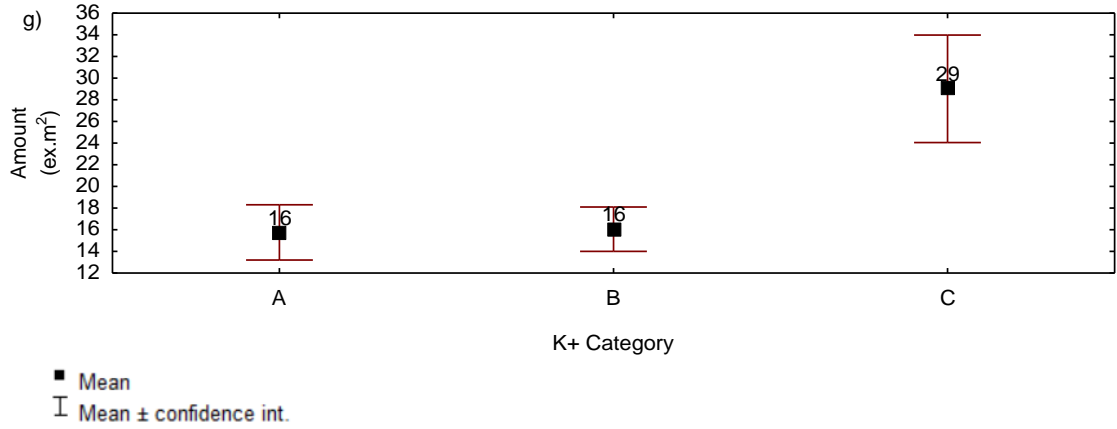


Fig.10: Projection of the variables to the factor-plane (1 x 2) for Lumbricidae

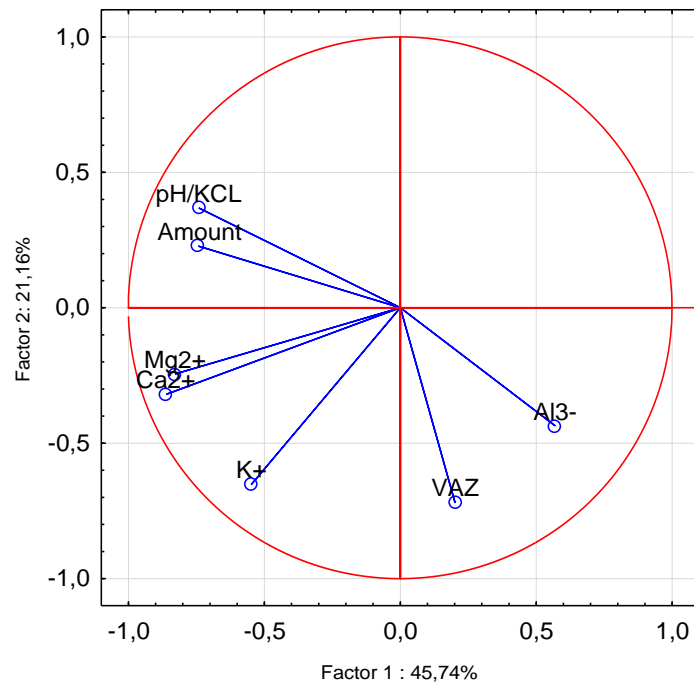


Fig.11: Abundance of Lumbricidae in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

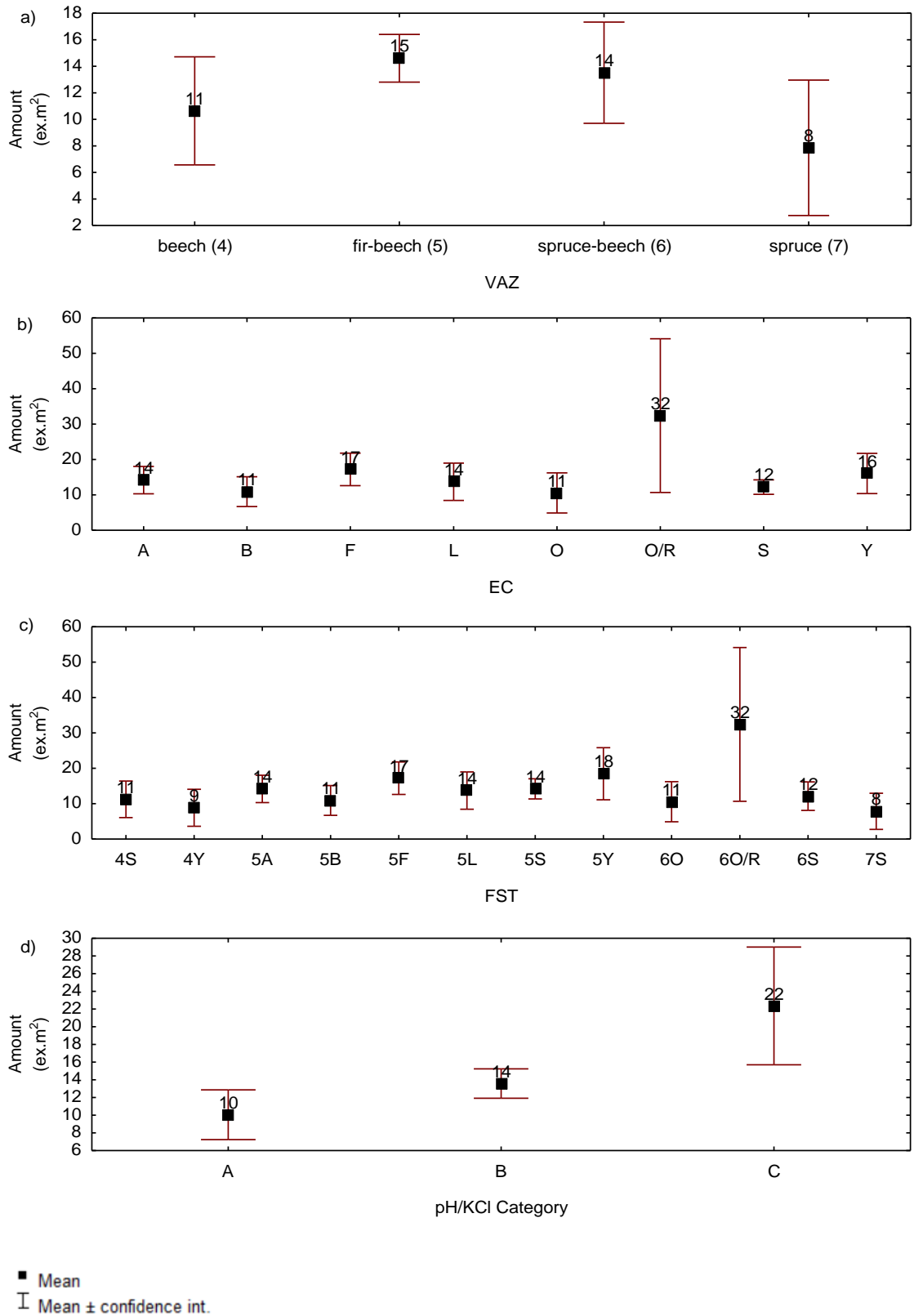
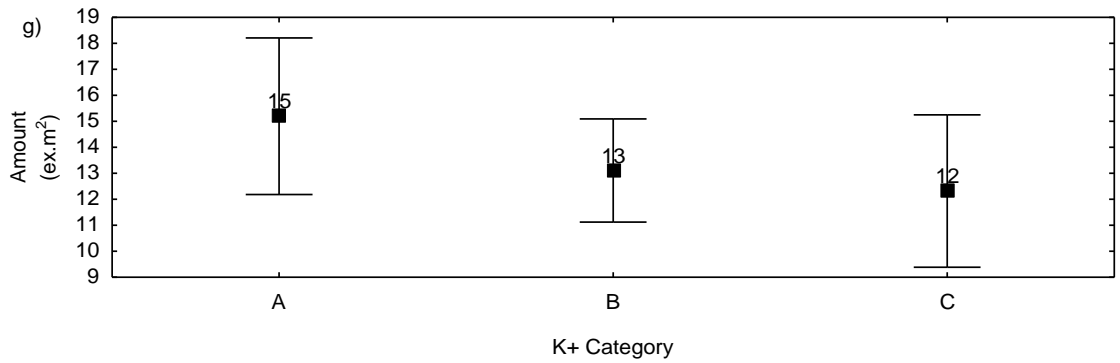
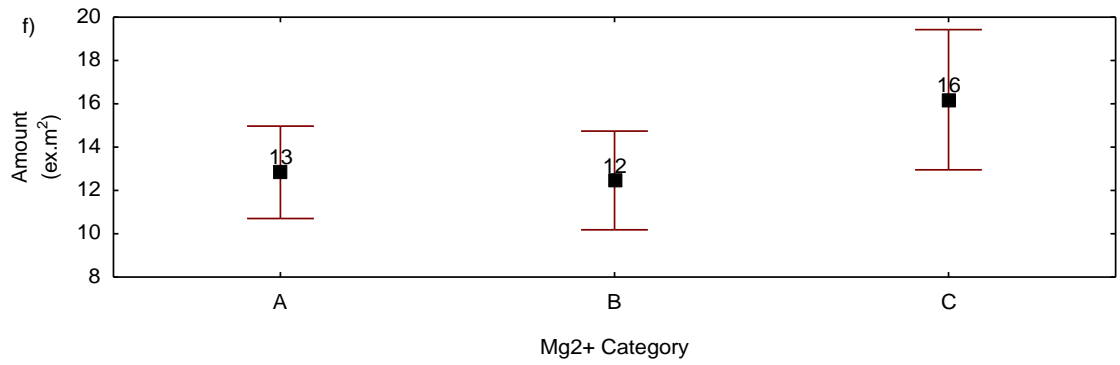
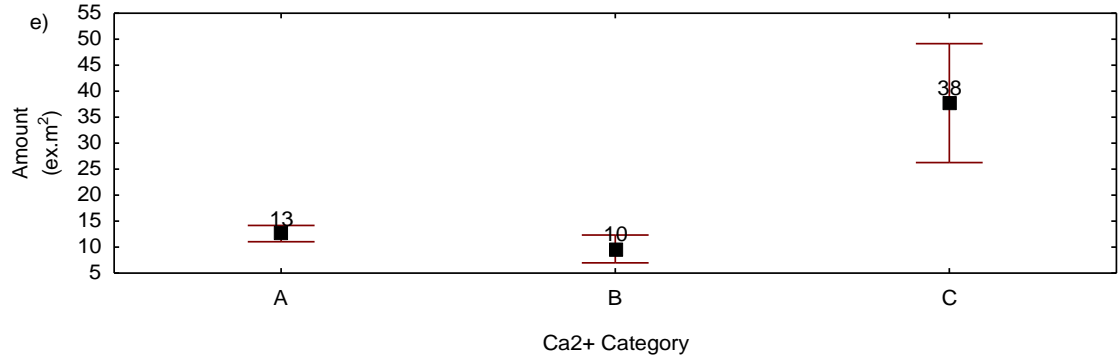


Fig.11(cont.): Abundance of Lumbricidae in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)



■ Mean
 I Mean ± confidence int.

Fig.12: Projection of the variables to the factor-plane (1 x 2) for Elateridae larvae

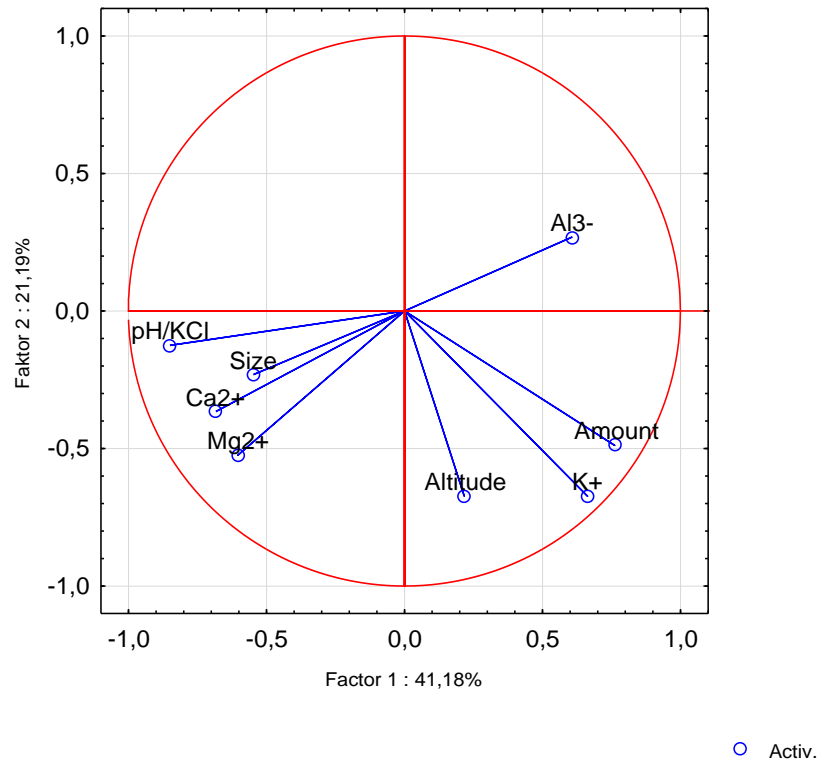


Fig.13: Abundance of Elateridae larvae in VAZ a), EC b), FST c), pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

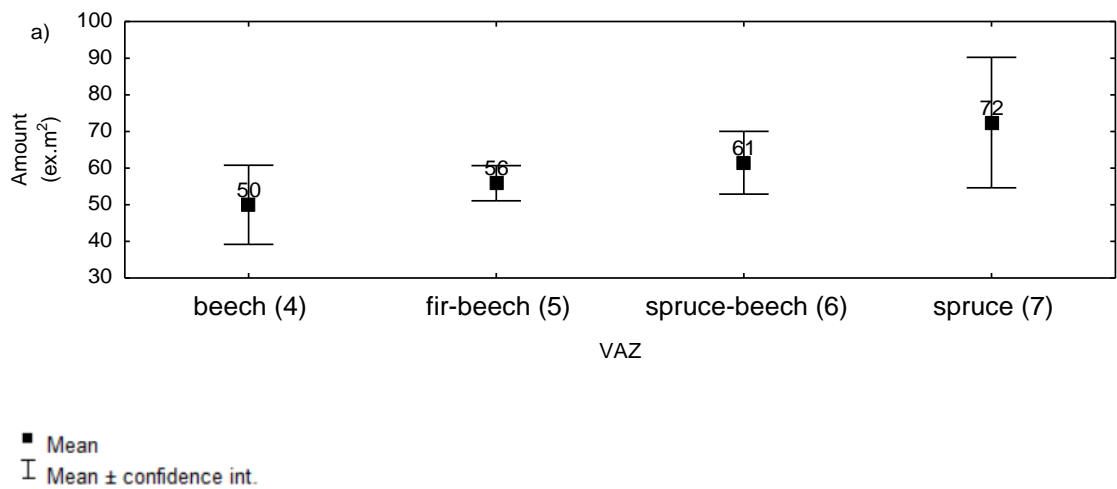


Fig.13(cont.): Abundance of Elateridae larvae in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

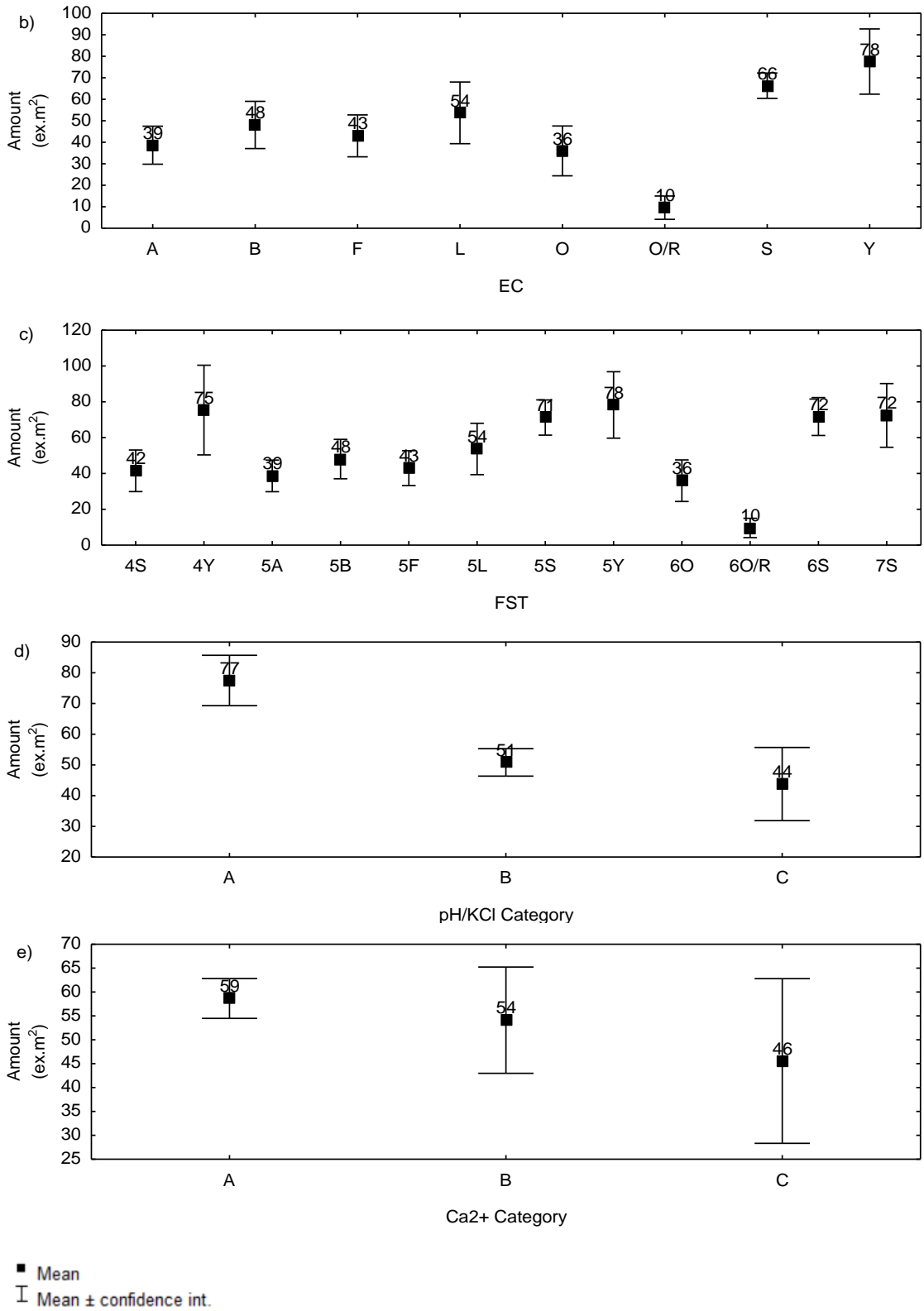


Fig.13(cont.): Abundance of Elateridae larvae in VAZ a), EC b), FST c),
pH/KCl d), Ca²⁺ e), Mg²⁺ f), K⁺ g)

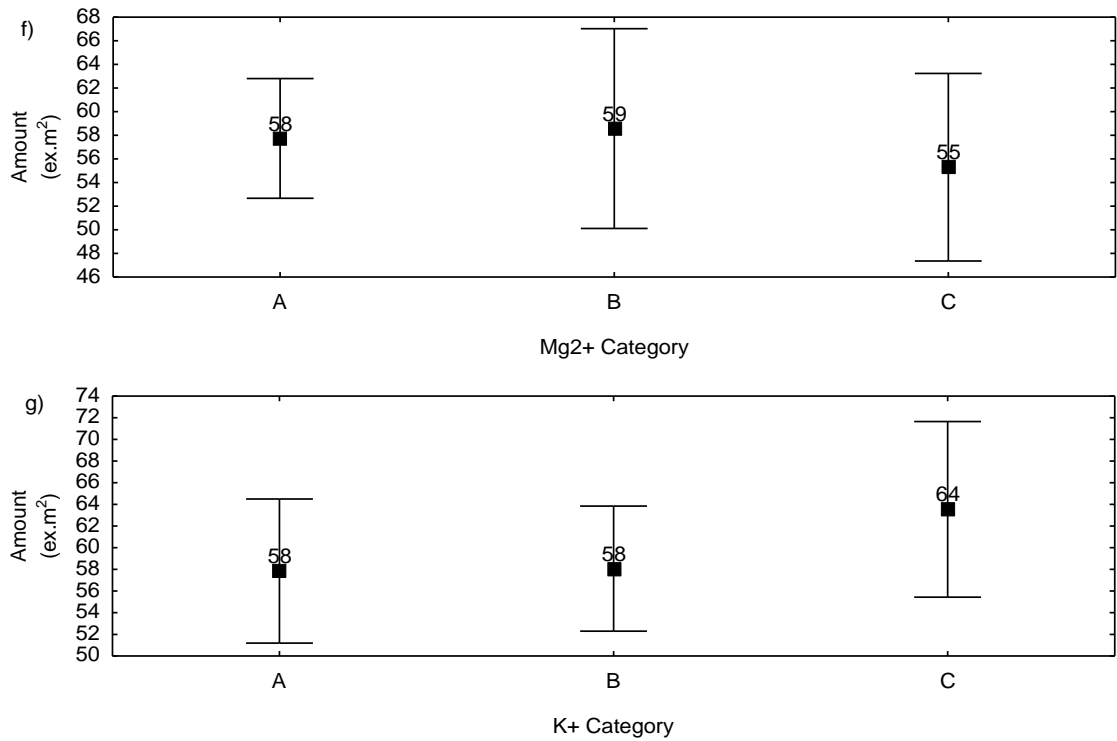


Fig.14: Tullgren

