

## Supplementary Material

### **Local patterns of edaphic mesofauna distribution in the arid Patagonian steppe, Argentina**

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**Table S1.** Mesofauna metrics data from 168 soil samples at Patagonian steppe (Chubut province). Mean, standard deviation and minimum and maximum values are consigned.

<i>Mesofauna metrics</i>	<b>Mean±SD</b>	<b>Min</b>	<b>Max</b>
Abundance (ind.m <sup>-2</sup> )	3136±515	0	5040
Richness	4.58±0.88	3	6
Diversity (Margalef's index)	0.76±0.19	0.39	1.12
Diversity (Simpson's index)	0.61±0.29	0.36	1.12
Diversity (Shannon's index)	0.82±0.27	0.36	1.81
Evenness (Pielou's index)	0.53±0.16	0.23	0.79
<i>Oribatid mites metrics</i>			
Abundance (ind.m <sup>-2</sup> )	3332±230	0	3050
Richness	6±4	1	15
Diversity (Margalef's index)	1.54±0.92	0	3.6
Diversity (Simpson's index)	0.44±0.26	0.1	1
Diversity (Shannon's index)	1.19±0.66	0	2.41
Evenness (Pielou's index)	0.70±0.30	0	0.96
N° Fam.	5±3	1	10
Abundance Macropylina (ind.m <sup>-2</sup> )	499±825	0	3050
Abundance Gymnonota (ind.m <sup>-2</sup> )	186±250	0	1570
Abundance Poronota (ind.m <sup>-2</sup> )	305±270	0	1050
Richness Macropylina	1±1	0	5
Richness Gymnonota	2±2	0	6
Richness Poronota	2±2	0	8

**Table S2.** Mean densities (ind.m<sup>-2</sup>) of mesofauna in 168 samples from study area (Chubut Province, Patagonia Argentina), according to phytogeographical criteria (shrubland and grassland), cover type (bare and covered soil), and sampling seasonally (autumn and spring). Mean values of total taxa, density and diversity (Shannon index) are also consigned.

<i>Oribatid communities</i>	Code	Autumn				Spring			
		Shrubland		Grassland		Shrubland		Grassland	
		Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil
Immature		230	1910	90	2210	1140	2430	380	1090
<u>MACROPYLINA</u>									
Aphelacaridae									
<i>Aphelacarus acarinus</i>	Apa	900	2630	50	280	330	3050	190	1050
Cosmochthoniidae									
<i>Cosmochthonius plumatus suramericanus</i>	Ccp		330			50	140		
Brachychthoniidae									
<i>Sellnickochthonius foliatus</i>	Sell						50		
<i>Liochthonius aff. saltaensis</i>	Las				190				
<i>Brachychthonius aff. berlesei</i>	Bra						50		
Haplochthoniidae									
<i>Haplochthonius (Haplochthonius) clavatus</i>	Hac		90						
Crotoniidae									
<i>Camisia segnis</i>	Cams	190	90						
<i>Camisia aff. hamulifera</i>	Camh								140
<i>Camisia sp.</i>	Cama		90						
Phthiracaridae									
<i>Hoplophorella aff. singularis</i>	Hsi		90						
<u>GYMNONOTA</u>									
Neoliodidae									
<i>Neoliodes sp.</i>	Nsp		50						
Scutoverticidae									
<i>Scutovertex transversalis</i>	Sct			140					
<i>Scutovertex sp2</i>	Sc2		50						
<i>Scutovertex sp1</i>	Sc1				140		50		
Pheroliodidae									
<i>Pheroliodes neuquinus</i>	Phn		50						
<i>Pheroliodes sp.</i>	Phs				470				
<i>Pheroliodes aff. minutus</i>	Phm				470	50		50	190

**Table S2. Continuation**

<i>Oribatid communities</i>	Code	Autumn				Spring			
		Shrub stratum		Grass stratum		Shrub stratum		Grass stratum	
		Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil
Caleremaeidae									
<i>Anderemaeus magellanicus</i>	And				90				
Licnodamaeidae									
<i>Licnodamaeus granulatus</i>	Lieg	50	90						
<i>Licnodamaeolus sp.</i>	Licl		280		90		50		100
Passalozetidae									
<i>Passalozetes (Passalozetes) sp.</i>	Ppa								186
Thyrisomidae									
<i>Banksinoma arcuatum</i>	Ban		50	50	140		140		100
Oppiidae									
<i>Oxyoppiinae sp.</i>	Oxi						100	100	
<i>Discoppia (Cylindroppia) tenuis</i>	Dic		190						
<i>Graptoppia (Graptoppia) sp.</i>	Grs				50				
<i>Graptoppia (Stenoppia) aff. multicorrugata</i>	Grm				90		290	50	430
<i>Brachioppiella sp1.</i>	Br1						570		
<i>Oppiella (Opiella) nova</i>	Ono		90			100			
<i>Karenella (Karenella) sp.</i>	Kks		90				190	50	
<i>Micropoppia minus</i>	Min			50		190	670	190	1570
<i>Austropoppia petrohuensis</i>	Aup						50		50
<i>Lanceoppia (Baioppia) moritzi</i>	Lan		280						
<b>PORONOTA</b>									
Tectocepheidae									
<i>Tectocepheus velatus</i>	Tev		140		280		230		
Protoribatidae									
<i>Tuxenia complicata</i>	Tux		50		230				230
<i>Totobates elegans</i>	Tot				330				
Liebstadiidae									
<i>Reductobates sp1.</i>	Red	280	280		230	260	50		300
Oribatulidae									
<i>Gerloubia (Monophauloppia) bicuspidata</i>	Geb	186	850		750	1050	950	190	300
<i>Gerloubia (Monophauloppia) sp.2.</i>	Ges			700	510				430

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<i>Oribatid communities</i>	Code	Autumn				Spring			
		Shrub stratum		Grass stratum		Shrub stratum		Grass stratum	
		Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil	Bare soil	Covered soil
<i>Jornadia sp.</i>	Jop	140		50	90		90		
<i>Oribatula sp1.</i>	Ori1		50						
<i>Paraphauloppia aff. australis</i>	Oria		50						
Oribatellidae									
<i>Oribatella aff. illuminata</i>	Orii			50					
Schelorbitidae									
<i>Schelorbitates cf. laticlava</i>	Sch				140				
<b><i>Mesafauna communities</i></b>									
<b>Collembola</b>									
Fam. Entomobrydae	ENT.	100	1150	350	800				800
Fam. Poduridae	POD.	350	1910	250	150	300	1850	1100	150
Ord. Symphypleona	SYM.	250	300	100	200	450	550	630	200
<b>Acari</b>									
Ord. Mesostigmata	MES.		200	150	1960	250	1000	650	1960
Subord. Prostigmata	PROS.	7630	20970	7430	15960	12370	18200	7280	15960
Subord. Oribatida	ORI	1560	5820	900	4430	1910	6630	630	4780
Mean density of mesofauna		1650	5060	1530	3920	15280	4700	1710	3970
Diversity (Shannon index)		0.71	1.16	0.7	1.26	0.6	1.2	1.05	1.6