

**Table S1.** Properties of non-mycorrhizal fungal-bacterial networks and AMF-bacterial networks based on Pearson or Spearman correlations. “-” shows where network topological properties do not apply because the network is empty, or the network is too simple.

Network	No. of nodes	No. of links	$\gamma$ of power-law	avgK	GD	Modules	M	Average size of modules	connectance	nestedness	% of fungal nodes	% of bacterial/archaeal nodes
<b>Non-mycorrhizal fungal-bacterial networks (Pearson correlation)</b>												
S1_bulk_W0	711	557	0.95	1.57	3.2	175	0.98	4.1	0.00473	1.14	262	449
S1_bulk_W03	783	611	0.971	1.56	3.73	192	0.98	4.1	0.00431	1.08	284	499
S1_bulk_W06	709	541	0.958	1.53	4.34	180	0.98	3.9	0.00458	1.14	268	441
S1_bulk_W09	705	602	0.957	1.71	3.32	162	0.97	4.4	0.00533	1.29	246	459
S1_bulk_W12	705	538	0.968	1.53	2.75	175	0.99	4	0.00478	1.21	244	461
S1_rhizosphere_W03	508	484	0.968	1.91	9.01	93	0.93	5.5	0.00784	1.66	201	307
S1_rhizosphere_W06	449	412	0.903	1.84	3.56	93	0.94	4.8	0.00877	1.29	166	283
S1_rhizosphere_W09	670	790	0.919	2.36	8.05	84	0.87	8	0.00829	1.44	205	465
S1_rhizosphere_W12	499	586	0.962	2.35	7.04	59	0.82	8.5	0.01156	1.47	142	357
S2_bulk_W0	723	617	0.907	1.71	3.96	185	0.94	3.9	0.0052	1.23	252	471
S2_bulk_W03	762	666	0.892	1.75	6.32	169	0.95	4.5	0.00517	1.03	253	509
S2_bulk_W06	675	596	0.962	1.77	6.36	141	0.96	4.8	0.006	1.22	217	458
S2_bulk_W09	721	682	0.95	1.89	6.62	148	0.91	5	0.006	1.29	233	488
S2_bulk_W12	707	544	0.967	1.54	3.9	178	0.98	4	0.00473	1.09	254	453
S2_rhizosphere_W03	499	538	0.947	2.16	6.08	78	0.93	6.4	0.00937	1.36	180	319
S2_rhizosphere_W06	593	689	0.905	2.32	11.99	75	0.9	7.9	0.00883	1.61	197	396
S2_rhizosphere_W09	493	704	0.91	2.86	7.42	59	0.78	8.4	0.01349	2.52	154	339
S2_rhizosphere_W12	310	368	0.902	2.37	5.16	58	0.82	5.4	0.01619	2.71	119	191
<b>AMF-bacterial networks (Pearson correlation)</b>												
S1_bulk_W0	8	5	1	1.25	1.29	3	0.64	2.7	0.33333	48.39	3	5
S1_bulk_W03	2	1	-	1	1	2	0	1	-	-	-	-
S1_bulk_W06	5	3	1	1.2	1.25	2	0.44	2.5	0.5	44.73	2	3
S1_bulk_W09	4	2	-	1	1	2	0.5	2	0.5	37.7	2	2
S1_bulk_W12	8	6	0.995	1.5	1.58	2	0.5	4	0.4	36.64	3	5
S1_rhizosphere_W03	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W06	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W09	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W12	0	0	-	-	-	-	-	-	-	-	-	-
S2_bulk_W0	23	15	0.917	1.3	1.42	8	0.84	2.9	0.125	29.26	8	15
S2_bulk_W03	16	11	0.889	1.38	1.52	5	0.71	3.2	0.2	38.48	5	11
S2_bulk_W06	8	5	1	1.25	1.29	3	0.64	2.7	0.33333	48.39	3	5
S2_bulk_W09	30	23	0.926	1.53	1.69	7	0.81	4.3	0.13068	26.95	8	22
S2_bulk_W12	51	41	0.996	1.61	2.02	12	0.84	4.25	0.07915	20.7	14	37
S2_bulk_W03	0	0	-	-	-	-	-	-	-	-	-	-
S2_bulk_W06	2	1	-	1	1	2	0	1	-	-	-	-
S2_bulk_W09	2	1	-	1	1	2	0	1	-	-	-	-
S2_bulk_W12	10	6	1	1.2	1.25	4	0.72	2.5	0.25	49.42	4	6
<b>Non-mycorrhizal fungal-bacterial networks (Spearman correlation)</b>												
S1_bulk_W0	737	542	0.936	1.47	3.64	198	0.99	3.7	0.00432	1.18	267	470
S1_bulk_W03	750	546	0.899	1.46	2.92	208	0.99	3.6	0.00414	1.15	281	469
S1_bulk_W06	723	524	0.941	1.45	2.73	202	0.99	3.6	0.00427	1.14	273	450
S1_bulk_W09	724	522	0.951	1.44	3.11	203	0.99	3.6	0.0043	1.01	264	460
S1_bulk_W12	737	562	0.865	1.53	5.4	182	0.98	4.0	0.00452	1.09	262	475
S1_rhizosphere_W03	504	384	0.947	1.52	5.71	128	0.97	3.9	0.00624	1.42	208	296
S1_rhizosphere_W06	540	443	0.956	1.64	7.9	119	0.94	4.5	0.00665	1.2	191	349
S1_rhizosphere_W09	648	717	0.944	2.21	6.83	100	0.82	6.5	0.0078	1.28	210	438
S1_rhizosphere_W12	497	770	0.872	3.1	5.07	62	0.64	8.0	0.01547	1.59	139	358
S2_bulk_W0	686	502	0.938	1.46	2.8	186	0.99	3.7	0.00466	1.24	243	443
S2_bulk_W03	701	538	0.937	1.53	8.09	176	0.97	4.0	0.00485	1.25	241	460
S2_bulk_W06	626	493	0.952	1.58	8.21	158	0.95	4.0	0.00542	1.43	229	397
S2_bulk_W09	679	509	0.971	1.5	5.16	180	0.98	3.8	0.00484	1.12	239	440
S2_bulk_W12	707	518	0.895	1.47	3.1	192	0.99	3.7	0.00452	1.24	252	455
S2_rhizosphere_W03	361	301	0.958	1.67	5.73	82	0.93	4.4	0.00938	1.69	158	203
S2_rhizosphere_W06	484	417	0.88	1.72	8.92	106	0.91	4.6	0.00762	1.64	180	304
S2_rhizosphere_W09	561	708	0.958	2.52	5.75	81	0.74	6.9	0.0108	2.22	166	395
S2_rhizosphere_W12	465	475	0.938	2.04	6.91	78	0.83	6.0	0.01016	1.82	147	318
<b>AMF-bacterial networks (Spearman correlation)</b>												
S1_bulk_W0	8	5	1	1.25	1.38	3	0.56	2.7	0.33333	44.9	3	5
S1_bulk_W03	0	0	-	-	-	-	-	-	-	-	-	-
S1_bulk_W06	7	4	1	1.14	1.2	3	0.63	2.3	0.33333	45.03	3	4
S1_bulk_W09	5	3	1	1.2	1.25	2	0.44	2.5	0.5	44.73	2	3
S1_bulk_W12	10	6	1	1.2	1.33	4	0.67	2.5	0.25	45.71	4	6
S1_rhizosphere_W03	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W06	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W09	0	0	-	-	-	-	-	-	-	-	-	-
S1_rhizosphere_W12	37	26	0.425	1.41	1.52	11	0.88	3.4	0.09091	22.72	11	26
S2_bulk_W0	15	10	1	1.33	1.33	5	0.8	3	0.2	70.6	5	10
S2_bulk_W03	9	5	1	1.11	1.17	4	0.72	2.3	0.25	50.52	4	5
S2_bulk_W06	33	24	0.714	1.45	1.64	9	0.81	3.7	0.11111	20.07	9	24
S2_bulk_W09	38	27	0.926	1.42	1.94	13	0.85	2.9	0.08036	24.38	14	24
S2_bulk_W12	0	0	-	-	-	-	-	-	-	-	-	-
S2_rhizosphere_W03	0	0	-	-	-	-	-	-	-	-	-	-
S2_rhizosphere_W06	4	3	1	1.5	1.5	2	0	-	-	-	-	-
S2_rhizosphere_W09	7	5	0.867	1.43	1.44	2	0.48	2	0.5	60.38	2	5
S2_rhizosphere_W12	8	5	1	1.25	1.38	3	0.56	3.5	0.33333	44.9	3	5

**Table S5.** The taxonomy of AMF nodes in AMF-bacterial networks.

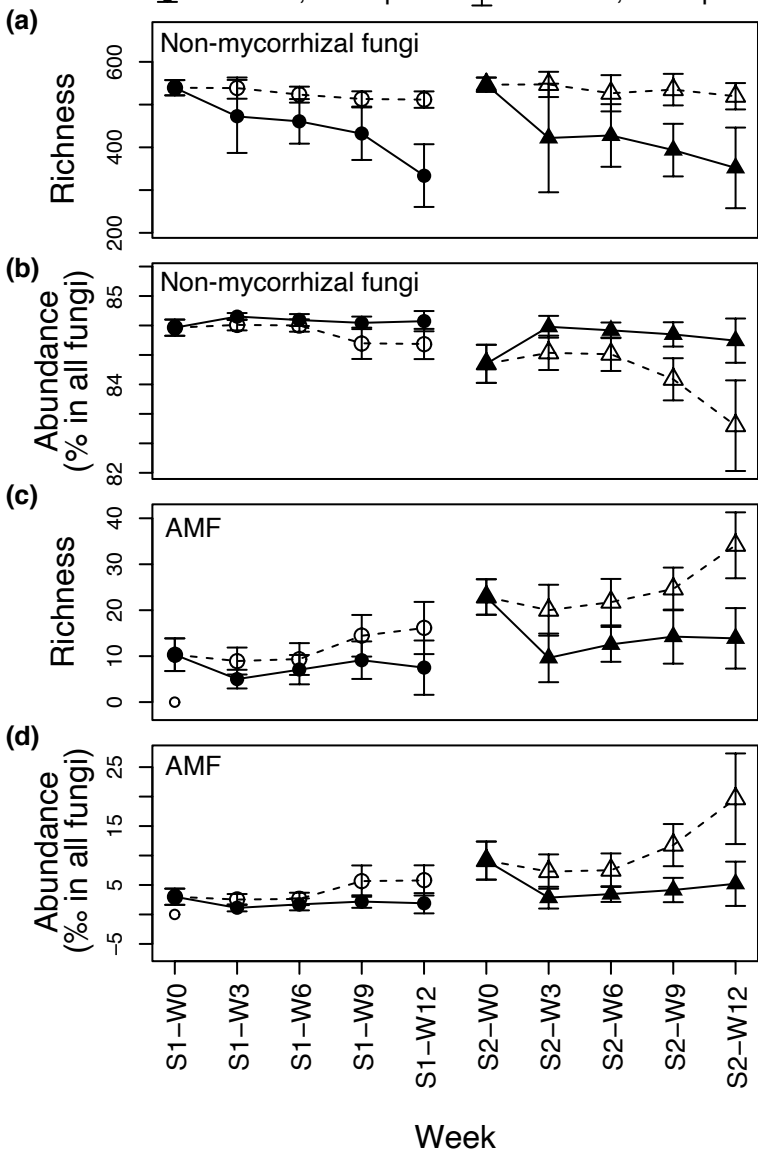
OTU ID	Class	Order	Family	Genus	Species
OTU_1860	Paraglomeromycetes	unidentified	unidentified	unidentified	unidentified
OTU_2483	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_2491	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_2718	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_2959	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_3019	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_3305	Glomeromycetes	Glomerales	Claroideoglomera	Claroideoglomus	Claroideoglomus_claroideum
OTU_3363	Glomeromycetes	Glomerales	Glomeraceae	Funneliformis	Funneliformis_mosseae
OTU_3384	unidentified	unidentified	unidentified	unidentified	unidentified
OTU_3390	Glomeromycetes	Glomerales	Glomeraceae	Funneliformis	Funneliformis_mosseae
OTU_3411	Glomeromycetes	Glomerales	Glomeraceae	Funneliformis	Funneliformis_mosseae
OTU_3432	Paraglomeromycetes	Paraglomerales	Paraglomeraceae	Paraglomus	unidentified
OTU_3484	Glomeromycetes	Glomerales	Glomeraceae	Funneliformis	Funneliformis_mosseae
OTU_3526	Glomeromycetes	Glomerales	Claroideoglomera	Claroideoglomus	Claroideoglomus_etunicatum
OTU_5004	Glomeromycetes	Glomerales	Glomeraceae	Glomus	Glomus_invermaium
OTU_5055	Glomeromycetes	Glomerales	Glomeraceae	Glomus	Glomus_invermaium
OTU_5259	unidentified	unidentified	unidentified	unidentified	unidentified
OTU_5336	unidentified	unidentified	unidentified	unidentified	unidentified
OTU_5348	Glomeromycetes	unidentified	unidentified	unidentified	unidentified
OTU_5442	Archaeosporomycetes	Archaeosporales	Archaeosporaceae	unidentified	unidentified
OTU_5472	unidentified	unidentified	unidentified	unidentified	unidentified
OTU_5615	Archaeosporomycetes	Archaeosporales	Archaeosporaceae	unidentified	unidentified

**Table S2.** Analysis of covariance (ANCOVA) on the topological parameters for the non-mycorrhizal fungal-bacterial networks and AMF-bacterial networks.

	No. of nodes		No. of links		avgK		Average size of modules		connectance		Proportion of "++" links	
<b>Non-mycorrhizal fungal-bacterial networks</b>												
	$F_{1,12}$	$P$	$F_{1,12}$	$P$	$F_{1,12}$	$P$	$F_{1,12}$	$P$	$F_{1,12}$	$P$	$F_{1,12}$	$P$
Season	0.47	0.507	0.48	0.502	6.66	<b>0.024</b>	0.32	0.581	12.84	<b>0.004</b>	5.9	<b>0.032</b>
Week	6.22	<b>0.028</b>	0.04	0.84	10.93	<b>0.006</b>	5.99	<b>0.031</b>	46.92	<b>&lt;0.001</b>	8.47	<b>0.013</b>
Location	24	<b>&lt;0.001</b>	0.18	0.681	33.97	<b>&lt;0.001</b>	16.72	<b>0.002</b>	104.35	<b>&lt;0.001</b>	35.62	<b>&lt;0.001</b>
Season:Week	1.2	0.294	1.24	0.288	0.04	0.843	0.67	0.43	3.21	<b>0.098</b>	0.19	0.673
Season:Location	0.3	0.596	0.12	0.739	0.58	0.461	0.02	0.905	4.02	0.068	0.24	0.63
Week:Location	3.41	0.09	0.09	0.771	12.38	<b>0.004</b>	4.92	<b>0.047</b>	42.47	<b>&lt;0.001</b>	11.06	<b>0.006</b>
Season:Week:Location	1.36	0.267	0.77	0.399	0.05	0.82	0.98	0.343	4.85	<b>0.048</b>	0.33	0.577
<b>AMF-bacterial networks</b>												
	$F_{4,12}$	$P$	$F_{4,12}$	$P$	$F_{1,8}$	$P$	$F_{1,8}$	$P$	$F_{1,3}$	$P$	$F_{1,8}$	$P$
Season	10.77	0.007	10.61	0.007	0.9	0.37	0.29	0.603	15.53	<b>0.011</b>	3.49	0.099
Week	0.33	0.578	0.92	0.356	0.47	0.512	0.69	0.429	0.68	<b>0.446</b>	4.98	0.056
Location	7.71	0.017	8.13	0.015	3.6	0.094	3.97	0.082	0.05	<b>0.834</b>	2.88	0.128
Season:Week	1.15	0.305	1.68	0.219	0.05	0.829	0	0.986	0.39	<b>0.558</b>	0.07	0.803
Season:Location	3.31	0.094	4.15	0.064	3.39	0.103	3.86	0.085	0.15	<b>0.716</b>	2.02	0.193
Week:Location	4	0.069	5.09	0.044	2.08	0.188	1.73	0.225	0.96	<b>0.373</b>	0.92	0.366
Season:Week:Location	1.84	0.2	2.66	0.129	-	-	-	-	-	-	-	-

\*These parameters cannot be calculated for empty networks or networks that are too simple. Thus, for AMF-bacterial networks, only 13 networks, instead of 18, were included in the ANCOVA analysis for avgK, M, and proportion of "++" links; only 10 networks were included in the analysis for connectance.

○ season 1, bulk      △ season 2, residual  
 ● season 1, rhizosphere      ▲ season 2, rhizosphere



**Table S3.** Module hubs and their taxonomy in the fungal-bacterial networks. ITS OTUs occurred in more than one networks are bold.

name	Degree (Number of links)	Network	taxonomy
11772_16S	7	S1_rhizosphere_W03	Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Geodermatophilaceae; Unclassified
2506_16S	8	S1_rhizosphere_W03	Bacteria; Actinobacteria; Actinobacteria; Solirubrobacterales; Conexibacteraceae; Conexibacter
39817_16S	7	S1_rhizosphere_W03	Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Cellvibrio
116776_16S	15	S1_rhizosphere_W12	Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae 1; Bacillus
1184_16S	6	S2_bulk_W12	Bacteria; Actinobacteria; Actinobacteria; Actinomycetales; Streptomycetaceae; Streptomyces
345236_16S	12	S2_rhizosphere_W03	Bacteria; Acidobacteria; Acidobacteria_Gp1; Unclassified; Unclassified; Gp1
170441_16S	7	S2_rhizosphere_W06	Bacteria; Acidobacteria; Acidobacteria_Gp16; Unclassified; Unclassified; Gp16
40627_16S	11	S2_rhizosphere_W12	Bacteria; Proteobacteria; Deltaproteobacteria; Myxococcales; Cystobacteraceae; Anaeromyxobacter
<b>2879_ITS</b>	7	S1_bulk_W0	Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>7105_ITS</b>	6	S1_bulk_W0	Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified
7295_ITS	5	S1_bulk_W0	Fungi; Ascomycota; Dothideomycetes; Pleosporales; unidentified; unidentified; unidentified
8446_ITS	6	S1_bulk_W0	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
8990_ITS	7	S1_bulk_W0	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>9998_ITS</b>	8	S1_bulk_W0	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>2928_ITS</b>	6	S1_bulk_W03	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
3152_ITS	6	S1_bulk_W03	Fungi; Chytridiomycota; Rhizophydiomycetes; Rhizophydiales; Alphamycetaceae; Betamyces; Betamyces_americae-meridionalis
3443_ITS	6	S1_bulk_W03	Fungi; Ascomycota; Sordariomycetes; Branch06; unidentified; unidentified; unidentified
8313_ITS	7	S1_bulk_W03	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Sporormiaceae; Preussia; Preussia_flanaganii
<b>9077_ITS</b>	6	S1_bulk_W03	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
9957_ITS	6	S1_bulk_W03	Fungi; Ascomycota; Sordariomycetes; Sordariales; Lasiosphaeriaceae; Arnium; unidentified
<b>10062_ITS</b>	7	S1_bulk_W06	Fungi; Ascomycota; Dothideomycetes; Pleosporales; unidentified; unidentified; unidentified
<b>6498_ITS</b>	8	S1_bulk_W06	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
8584_ITS	10	S1_bulk_W06	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
8859_ITS	7	S1_bulk_W06	Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified
9112_ITS	6	S1_bulk_W06	Fungi; Ascomycota; Dothideomycetes; Botryosphaeriales; unidentified; unidentified; unidentified
<b>9764_ITS</b>	5	S1_bulk_W06	Fungi; Ascomycota; Eurotiomycetes; Onygenales; Onygenales_fam_Incertae_sedis; Chrysosporium; Chrysosporium_merdarium
<b>2928_ITS</b>	6	S1_bulk_W09	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
<b>3189_ITS</b>	11	S1_bulk_W09	Fungi; Basidiomycota; Atractiellomycetes; Atractiellales; Hoehnelomycetaceae; Atractiella; unidentified
5036_ITS	5	S1_bulk_W09	Fungi; Mucoromycota; Mucoromycetes; Mucorales; Cunninghamellaceae; Gongronella; Gongronella_butleri
<b>8864_ITS</b>	16	S1_bulk_W09	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
9163_ITS	11	S1_bulk_W09	Fungi; Ascomycota; Sordariomycetes; Sordariales; unidentified; unidentified; unidentified
9316_ITS	16	S1_bulk_W09	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Sporormiaceae; Preussia; Preussia_flanaganii
9500_ITS	6	S1_bulk_W09	Fungi; Ascomycota; Sordariomycetes; Sordariales; Lasiosphaeriaceae; Schizothecium; Schizothecium_glutinans
<b>1902_ITS</b>	6	S1_bulk_W12	Fungi; Chytridiomycota; Chytridiomycetes; unidentified; unidentified; unidentified; unidentified
<b>3189_ITS</b>	9	S1_bulk_W12	Fungi; Basidiomycota; Atractiellomycetes; Atractiellales; Hoehnelomycetaceae; Atractiella; unidentified
<b>4709_ITS</b>	5	S1_bulk_W12	Fungi; Basidiomycota; Agaricomycetes; Agaricales; Entolomataceae; Entoloma; Entoloma_graphitipes_f._cystidium
<b>6540_ITS</b>	6	S1_bulk_W12	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Melanommataceae; unidentified; unidentified
6681_ITS	7	S1_bulk_W12	Fungi; Ascomycota; Eurotiomycetes; unidentified; unidentified; unidentified; unidentified
7328_ITS	6	S1_bulk_W12	Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Aspergillus; Aspergillus_crustus
<b>9077_ITS</b>	7	S1_bulk_W12	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
10177_ITS	5	S1_rhizosphere_W03	Fungi; Ascomycota; Leotiomycetes; unidentified; unidentified; unidentified; unidentified
3778_ITS	10	S1_rhizosphere_W03	Fungi; Mucoromycota; Mucoromycetes; Mucorales; Mucoraceae; Actinomucor; Actinomucor_elegans
<b>8073_ITS</b>	7	S1_rhizosphere_W03	Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Penicillium; unidentified
8293_ITS	11	S1_rhizosphere_W03	Fungi; Ascomycota; Sordariomycetes; Coniochaetales; Coniochaetaceae; Coniochaeta; Coniochaeta_polymorpha
<b>8297_ITS</b>	10	S1_rhizosphere_W03	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
8476_ITS	8	S1_rhizosphere_W03	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>10062_ITS</b>	9	S1_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; Pleosporales; unidentified; unidentified; unidentified
<b>1902_ITS</b>	16	S1_rhizosphere_W06	Fungi; Chytridiomycota; Chytridiomycetes; unidentified; unidentified; unidentified; unidentified
<b>3174_ITS</b>	7	S1_rhizosphere_W06	Fungi; Mucoromycota; Mucoromycetes; Mucorales; Mucoraceae; Actinomucor; Actinomucor_elegans
3344_ITS	22	S1_rhizosphere_W06	Fungi; Ascomycota; Leotiomycetes; Helotiales; Helotiales_fam_Incertae_sedis; Chalara; Chalara_heteroderae
<b>6190_ITS</b>	7	S1_rhizosphere_W06	Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Aspergillus; Aspergillus_fresenii
7144_ITS	11	S1_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified
8521_ITS	14	S1_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; unidentified; unidentified; unidentified; unidentified
8589_ITS	10	S1_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; Botryosphaeriales; unidentified; unidentified; unidentified

1667 ITS 6 S1\_rhizosphere\_W09 Fungi; Mortierellomycota; Mortierellomycetes; Mortierellales; Mortierellaceae; Mortierella; Mortierella\_alpina

1798 ITS 15 S1\_rhizosphere\_W09 Fungi; Ascomycota; Sordariomycetes; Sordariales; Chaetomiaceae; Humicola; Humicola\_grisea

3005 ITS 8 S1\_rhizosphere\_W09 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified

5385 ITS 8 S1\_rhizosphere\_W09 Fungi; Ascomycota; Sordariomycetes; Glomerellales; Plectosphaerellaceae; Gibellulopsis; Gibellulopsis\_piscis

5498 ITS 10 S1\_rhizosphere\_W09 Fungi; Ascomycota; Geoglossomycetes; Geoglossales; Geoglossaceae; unidentified; unidentified

5528 ITS 10 S1\_rhizosphere\_W09 Fungi; Ascomycota; Sordariomycetes; Microascales; Microascaceae; Cephalotrichum; Cephalotrichum\_asperulum

5973 ITS 11 S1\_rhizosphere\_W09 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Pleosporaceae; Drechslera; Drechslera\_poae

6080 ITS 9 S1\_rhizosphere\_W09 Fungi; Ascomycota; Eurotiomycetes; Chaetothyriales; unidentified; unidentified; unidentified

6190 ITS 8 S1\_rhizosphere\_W09 Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Aspergillus; Aspergillus\_fresenii

6438 ITS 6 S1\_rhizosphere\_W09 Fungi; Ascomycota; Dothideomycetes; Botryosphaerales; Botryosphaeriaceae; Macrophomina; Macrophomina\_phaseolina

6574 ITS 8 S1\_rhizosphere\_W09 Fungi; Ascomycota; Sordariomycetes; Glomerellales; Plectosphaerellaceae; Plectosphaerella; Plectosphaerella\_cucumerina

6871 ITS 9 S1\_rhizosphere\_W09 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

7105 ITS 8 S1\_rhizosphere\_W09 Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified

7250 ITS 20 S1\_rhizosphere\_W09 Fungi; Ascomycota; Dothideomycetes; Capnodiales; Cladosporiaceae; Cladosporium; Cladosporium\_sphaerospermum

8350 ITS 11 S1\_rhizosphere\_W09 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

8600 ITS 32 S1\_rhizosphere\_W09 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

9029 ITS 11 S1\_rhizosphere\_W09 Fungi; Ascomycota; Leotiomycetes; Helotiales; Rutstroemiaceae; unidentified; unidentified

9764 ITS 6 S1\_rhizosphere\_W09 Fungi; Ascomycota; Eurotiomycetes; Onygenales; Onygenales\_fam\_Incertae\_sedis; Chrysosporium; Chrysosporium\_merdarium

5365 ITS 6 S1\_rhizosphere\_W12 Fungi; Ascomycota; Sordariomycetes; Microascales; Microascaceae; Cephalotrichum; Cephalotrichum\_asperulum

6540 ITS 7 S1\_rhizosphere\_W12 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Melanommataceae; unidentified; unidentified

6639 ITS 7 S1\_rhizosphere\_W12 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Lindgomycetaceae; Clohesyomyces; Clohesyomyces\_aquaticus

7105 ITS 22 S1\_rhizosphere\_W12 Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified

8029 ITS 8 S1\_rhizosphere\_W12 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

8225 ITS 16 S1\_rhizosphere\_W12 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Pleosporales\_fam\_Incertae\_sedis; Polyschema; Polyschema\_sclerotigenum

8297 ITS 12 S1\_rhizosphere\_W12 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

8506 ITS 12 S1\_rhizosphere\_W12 Fungi; Ascomycota; Dothideomycetes; unidentified; unidentified; unidentified; unidentified

8600 ITS 12 S1\_rhizosphere\_W12 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

8785 ITS 19 S1\_rhizosphere\_W12 Fungi; Ascomycota; Sordariomycetes; Sordariales; Chaetomiaceae; Amesia; Amesia\_atrobrunnea

8831 ITS 28 S1\_rhizosphere\_W12 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

8845 ITS 10 S1\_rhizosphere\_W12 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

8923 ITS 6 S1\_rhizosphere\_W12 Fungi; Ascomycota; Archaeorhizomycetes; Archaeorhizomycetales; Archaeorhizomycetaceae; Archaeorhizomyces; unidentified

4709 ITS 10 S2\_bulk\_W0 Fungi; Basidiomycota; Agaricomycetes; Agaricales; Entolomataceae; Entoloma; Entoloma\_graphitipes\_f\_cystidiatum

5093 ITS 7 S2\_bulk\_W0 Fungi; Ascomycota; Sordariomycetes; Microascales; Microascaceae; Cephalotrichum; Cephalotrichum\_purpureofuscum

5312 ITS 8 S2\_bulk\_W0 Fungi; Mucoromycota; Mucoromycetes; Mucorales; Rhizopodaceae; Rhizopus; Rhizopus\_arrhizus

8100 ITS 21 S2\_bulk\_W0 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Periconiaceae; Periconia; unidentified

8845 ITS 19 S2\_bulk\_W0 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

8900 ITS 18 S2\_bulk\_W0 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

9065 ITS 18 S2\_bulk\_W0 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

1798 ITS 21 S2\_bulk\_W03 Fungi; Ascomycota; Sordariomycetes; Sordariales; Chaetomiaceae; Humicola; Humicola\_grisea

3005 ITS 10 S2\_bulk\_W03 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

4709 ITS 6 S2\_bulk\_W03 Fungi; Basidiomycota; Agaricomycetes; Agaricales; Entolomataceae; Entoloma; Entoloma\_graphitipes\_f\_cystidiatum

5389 ITS 6 S2\_bulk\_W03 Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified

6961 ITS 6 S2\_bulk\_W03 Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Penicillium; Penicillium\_canescens

7909 ITS 8 S2\_bulk\_W03 Fungi; Ascomycota; Eurotiomycetes; unidentified; unidentified; unidentified; unidentified

8107 ITS 26 S2\_bulk\_W03 Fungi; Ascomycota; Dothideomycetes; unidentified; unidentified; unidentified; unidentified

8716 ITS 7 S2\_bulk\_W03 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Leptosphaeriaceae; Plenodomus; Plenodomus\_biglobosus

10032 ITS 7 S2\_bulk\_W06 Fungi; Ascomycota; Archaeorhizomycetes; Archaeorhizomycetales; Archaeorhizomycetaceae; Archaeorhizomyces; unidentified

10380 ITS 7 S2\_bulk\_W06 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

2167 ITS 8 S2\_bulk\_W06 Fungi; Mortierellomycota; Mortierellomycetes; Mortierellales; Mortierellaceae; Mortierella; Mortierella\_alpina

3036 ITS 11 S2\_bulk\_W06 Fungi; Chytridiomycota; Spizellomycetes; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified

3101 ITS 14 S2\_bulk\_W06 Fungi; Basidiomycota; unidentified; unidentified; unidentified; unidentified; unidentified

5428 ITS 7 S2\_bulk\_W06 Fungi; Ascomycota; Sordariomycetes; Hypocreales; Hypocreales\_fam\_Incertae\_sedis; Acremonium; Acremonium\_alternatum

5792 ITS 6 S2\_bulk\_W06 Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Penicillium; Penicillium\_canescens

6498 ITS 9 S2\_bulk\_W06 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

7837 ITS 25 S2\_bulk\_W06 Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified

7884 ITS 11 S2\_bulk\_W06 Fungi; Ascomycota; Sordariomycetes; Hypocreales; Hypocreales\_fam\_Incertae\_sedis; Myxocephala; Myxocephala\_albida

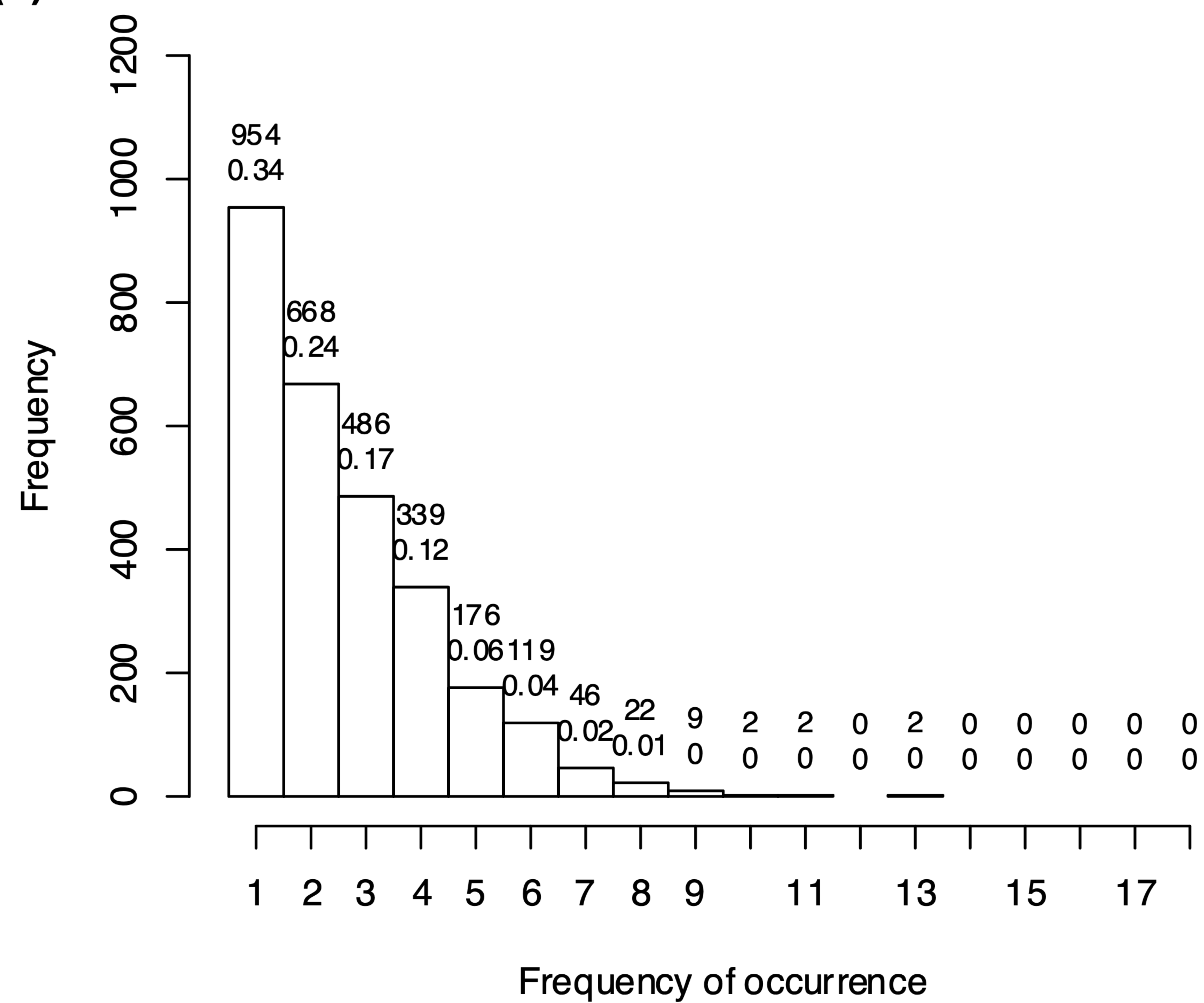
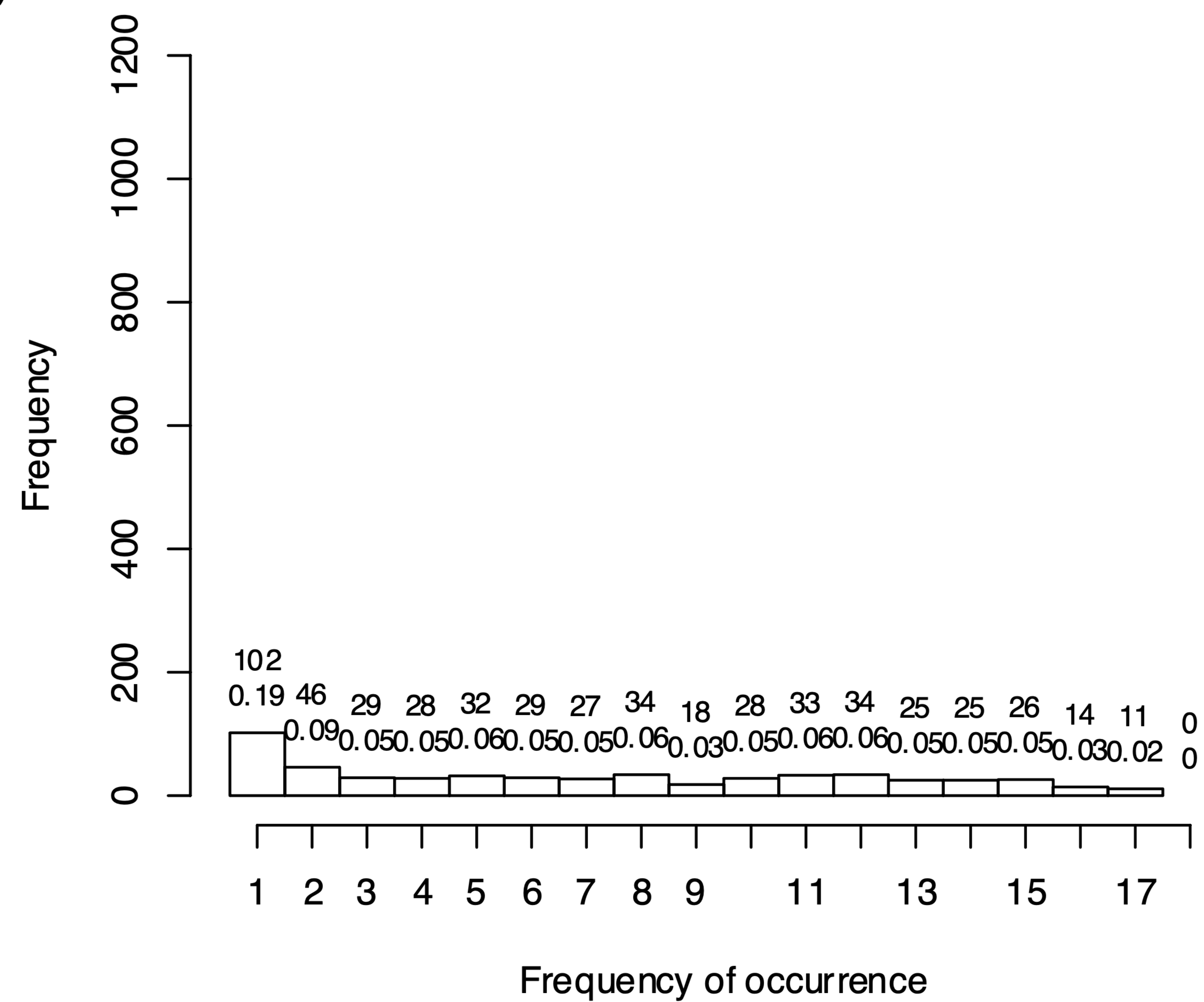
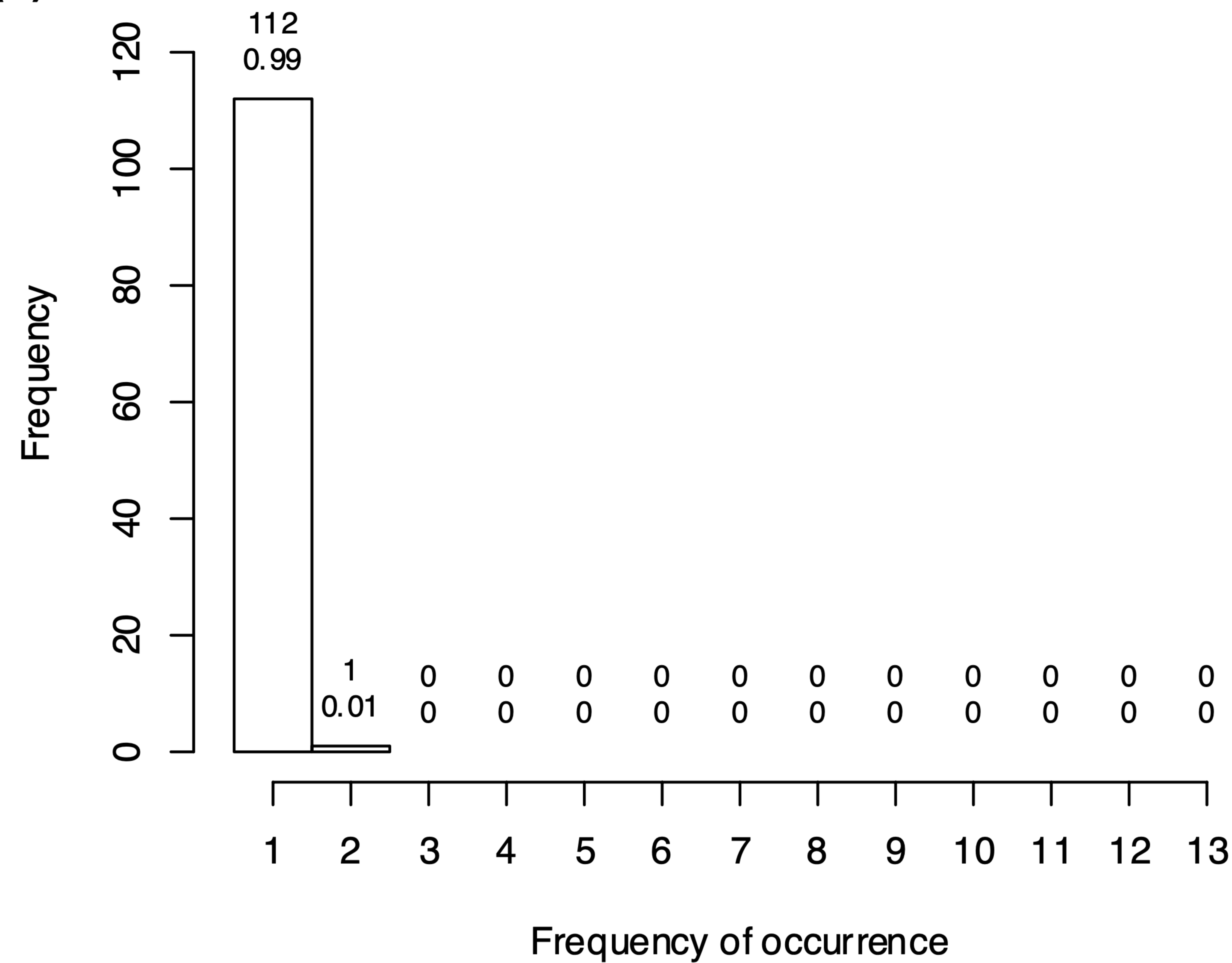
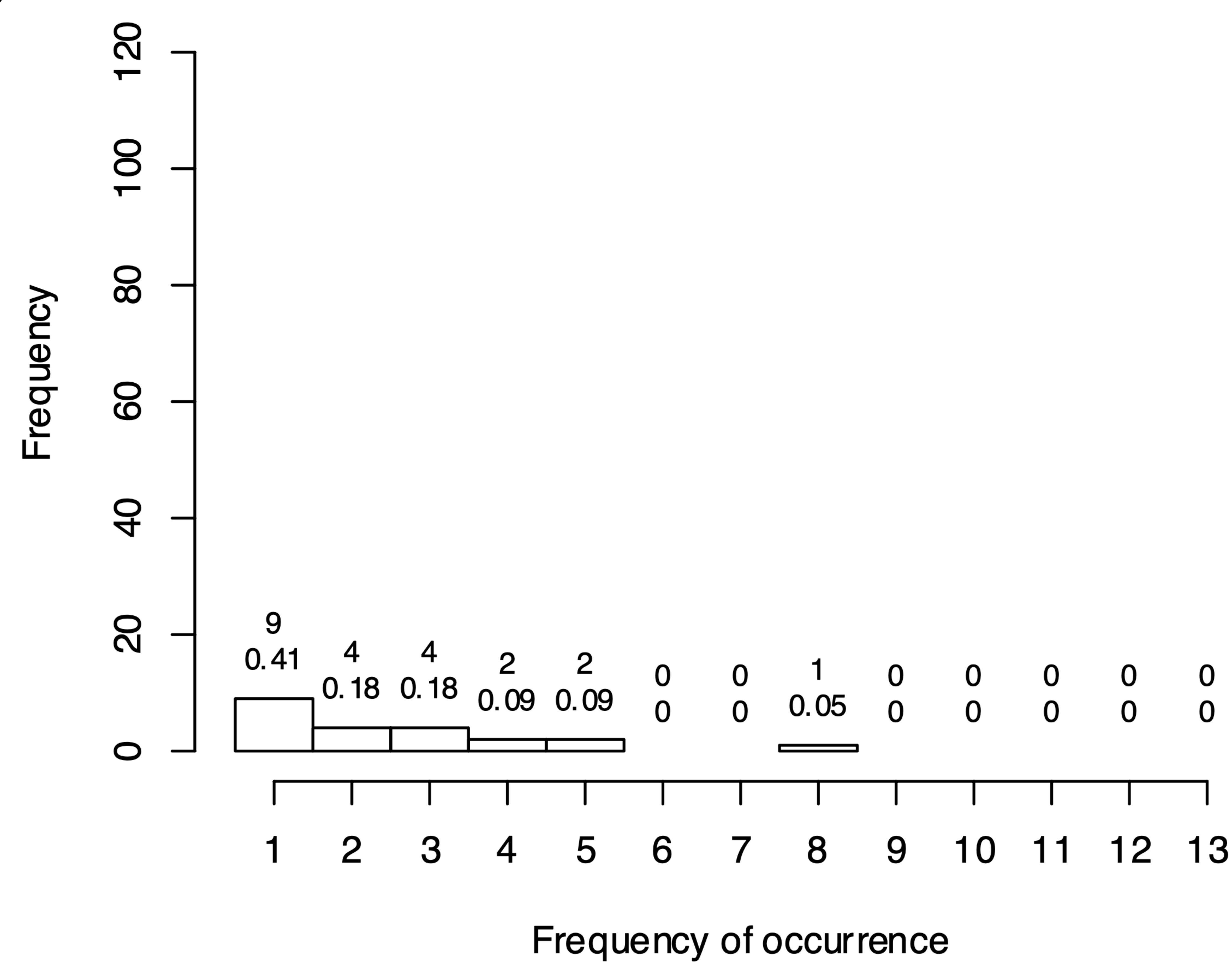
8206 ITS 8 S2\_bulk\_W06 Fungi; Ascomycota; Dothideomycetes; Pleosporales; unidentified; unidentified; unidentified

8453 ITS 9 S2\_bulk\_W06 Fungi; Ascomycota; Dothideomycetes; Pleosporales; Lophotremataceae; unidentified; unidentified

10308 ITS 9 S2\_bulk\_W09 Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

10608 ITS	8 S2_bulk_W09	Fungi; Ascomycota; Archaeorhizomycetes; Archaeorhizomycetales; Archaeorhizomycetaceae; Archaeorhizomyces; unidentified
1282 ITS	7 S2_bulk_W09	Fungi; Basidiomycota; Agaricomycetes; unidentified; unidentified; unidentified; unidentified
1342 ITS	15 S2_bulk_W09	Fungi; Basidiomycota; Agaricomycetes; unidentified; unidentified; unidentified; unidentified
<b>1798 ITS</b>	12 S2_bulk_W09	Fungi; Ascomycota; Sordariomycetes; Sordariales; Chaetomiaceae; Humicola; Humicola_grisea
1860 ITS	6 S2_bulk_W09	Fungi; Glomeromycota; Paraglomeromycetes; unidentified; unidentified; unidentified; unidentified
2464 ITS	7 S2_bulk_W09	Fungi; Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
3024 ITS	15 S2_bulk_W09	Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
3040 ITS	7 S2_bulk_W09	Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>3174 ITS</b>	18 S2_bulk_W09	Fungi; Mucoromycota; Mucoromycetes; Mucorales; Mucoraceae; Actinomucor; Actinomucor_elegans
6390 ITS	7 S2_bulk_W09	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
6548 ITS	9 S2_bulk_W09	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
7652 ITS	9 S2_bulk_W09	Fungi; Ascomycota; Eurotiomycetes; Onygenales; Gymnoascaceae; Gymnoascus; Gymnoascus_reessii
7746 ITS	7 S2_bulk_W09	Fungi; Ascomycota; Eurotiomycetes; Chaetothyriales; Herpotrichiellaceae; unidentified; unidentified
<b>8453 ITS</b>	15 S2_bulk_W09	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Lophotremataceae; unidentified; unidentified
<b>8845 ITS</b>	23 S2_bulk_W09	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
2100 ITS	7 S2_bulk_W12	Fungi; Mortierellomycota; Mortierellomycetes; Mortierellales; Mortierellaceae; Mortierella; Mortierella_gamsii
<b>3036 ITS</b>	8 S2_bulk_W12	Fungi; Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
4722 ITS	6 S2_bulk_W12	Fungi; Ascomycota; Sordariomycetes; Branch06; unidentified; unidentified; unidentified
<b>6190 ITS</b>	8 S2_bulk_W12	Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Aspergillus; Aspergillus_fresenii
6671 ITS	8 S2_bulk_W12	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>8453 ITS</b>	7 S2_bulk_W12	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Lophotremataceae; unidentified; unidentified
<b>8716 ITS</b>	9 S2_bulk_W12	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Leptosphaeriaceae; Plenodomus; Plenodomus_biglobosus
<b>3174 ITS</b>	10 S2_rhizosphere_W03	Fungi; Mucoromycota; Mucoromycetes; Mucorales; Mucoraceae; Actinomucor; Actinomucor_elegans
5292 ITS	8 S2_rhizosphere_W03	Fungi; Ascomycota; Sordariomycetes; Hypocreales; Hypocreales_fam_Incertae_sedis; Acremonium; Acremonium_persicinum
5859 ITS	6 S2_rhizosphere_W03	Fungi; Ascomycota; Sordariomycetes; unidentified; unidentified; unidentified; unidentified
6955 ITS	11 S2_rhizosphere_W03	Fungi; Ascomycota; Sordariomycetes; Hypocreales; Nectriaceae; Fusarium; Fusarium_oxysporum
<b>7250 ITS</b>	14 S2_rhizosphere_W03	Fungi; Ascomycota; Dothideomycetes; Capnodiales; Cladosporiaceae; Cladosporium; Cladosporium_sphaerospermum
<b>7837 ITS</b>	12 S2_rhizosphere_W03	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
<b>8785 ITS</b>	15 S2_rhizosphere_W03	Fungi; Ascomycota; Sordariomycetes; Sordariales; Chaetomiaceae; Amesia; Amesia_atrobrunnea
<b>8831 ITS</b>	10 S2_rhizosphere_W03	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>8864 ITS</b>	11 S2_rhizosphere_W03	Fungi; unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
<b>9029 ITS</b>	10 S2_rhizosphere_W03	Fungi; Ascomycota; Leotiomyces; Helotiales; Rutstroemiaeaceae; unidentified; unidentified
10552 ITS	7 S2_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; Venturiales; Sympoventuriaceae; Veronaeopsis; Veronaeopsis_simplex
2139 ITS	8 S2_rhizosphere_W06	Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
2729 ITS	6 S2_rhizosphere_W06	Fungi; Basidiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>2879 ITS</b>	25 S2_rhizosphere_W06	Fungi; Chytridiomycota; unidentified; unidentified; unidentified; unidentified; unidentified
<b>3036 ITS</b>	7 S2_rhizosphere_W06	Fungi; Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
3094 ITS	15 S2_rhizosphere_W06	Fungi; Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
<b>5428 ITS</b>	21 S2_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; Hypocreales; Hypocreales_fam_Incertae_sedis; Acremonium; Acremonium_alternatum
7156 ITS	6 S2_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; Hypocreales; Bionectriaceae; Clonostachys; Clonostachys_rosea
<b>8073 ITS</b>	6 S2_rhizosphere_W06	Fungi; Ascomycota; Eurotiomycetes; Eurotiales; Aspergillaceae; Penicillium; unidentified
8348 ITS	15 S2_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Pleosporaceae; Drechslera; unidentified
<b>8350 ITS</b>	8 S2_rhizosphere_W06	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
8548 ITS	8 S2_rhizosphere_W06	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Leptosphaeriaceae; Neophaeosphaeria; unidentified
8640 ITS	13 S2_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; Sordariales; Lasiosphaeriaceae; Podospora; unidentified
8642 ITS	7 S2_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; Coniochaetales; Coniochaetaeaceae; Coniochaeta; Coniochaeta_ligniaria
<b>9957 ITS</b>	8 S2_rhizosphere_W06	Fungi; Ascomycota; Sordariomycetes; Sordariales; Lasiosphaeriaceae; Arnium; unidentified
10454 ITS	19 S2_rhizosphere_W09	Fungi; Ascomycota; Leotiomyces; Helotiales; Myxotrichaceae; unidentified; unidentified
6002 ITS	12 S2_rhizosphere_W09	Fungi; Ascomycota; Eurotiomycetes; Chaetothyriales; unidentified; unidentified; unidentified
6365 ITS	10 S2_rhizosphere_W09	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
6567 ITS	13 S2_rhizosphere_W09	Fungi; Ascomycota; Dothideomycetes; Dothideales; Dothioraceae; Hormonema; Hormonema_viticola
7349 ITS	13 S2_rhizosphere_W09	Fungi; Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
7699 ITS	9 S2_rhizosphere_W09	Fungi; Ascomycota; Leotiomyces; unidentified; unidentified; unidentified; unidentified
8171 ITS	11 S2_rhizosphere_W09	Fungi; Ascomycota; Dothideomycetes; Pleosporales; unidentified; unidentified; unidentified
<b>8225 ITS</b>	8 S2_rhizosphere_W09	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Pleosporales_fam_Incertae_sedis; Polyschema; Polyschema_sclerotigenum
<b>8716 ITS</b>	9 S2_rhizosphere_W09	Fungi; Ascomycota; Dothideomycetes; Pleosporales; Leptosphaeriaceae; Plenodomus; Plenodomus_biglobosus
<b>9029 ITS</b>	9 S2_rhizosphere_W09	Fungi; Ascomycota; Leotiomyces; Helotiales; Rutstroemiaeaceae; unidentified; unidentified
8547 ITS	6 S2_rhizosphere_W12	Fungi; Ascomycota; Sordariomycetes; Sordariales; Lasiosphaeriaceae; Podospora; Podospora_intestinacea



**(a)****(b)****(c)****(d)**

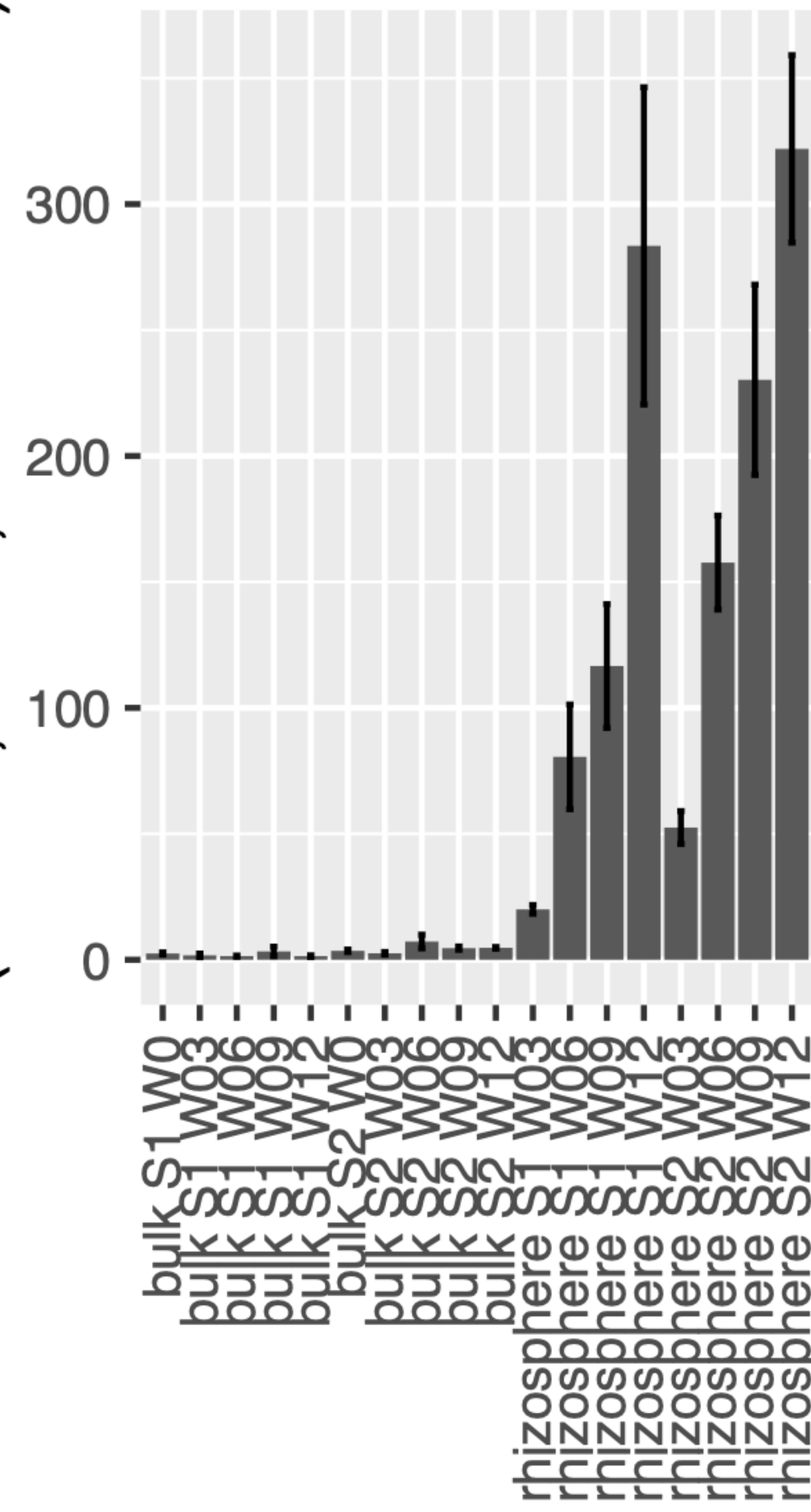
**Table S4.** Links connecting genome-resolved bacterial genomes and their fungal associates.

Link	Network	Sign	Matching_genomes*	ITS node role	ITS node taxonomy
7765_16S - 10394_ITS	S2_rhizosphere_W09	-	Acidobacteria_60_12	peripherals	Ascomycota; Leotiomyces; Helotiales; Myxotrichaceae; unidentified; unidentified
175932_16S - 6241_ITS	S1_bulk_W0	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Eurotiomyces; unidentified; unidentified; unidentified; unidentified
175932_16S - 10131_ITS	S1_bulk_W03	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Sordariomyces; Sordariales; Lasiosphaeriaceae; Schizothecium; unidentified
175932_16S - 6465_ITS	S1_bulk_W03	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 6654_ITS	S1_bulk_W03	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Eurotiomyces; Chaetothyriales; Herpotrichiellaceae; unidentified; unidentified
175932_16S - 6821_ITS	S1_bulk_W03	+	Rhizobium_leguminosarum_59_9	peripherals	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 7093_ITS	S1_bulk_W06	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 2464_ITS	S1_bulk_W09	+	Rhizobium_leguminosarum_59_9	peripherals	Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
175932_16S - 6655_ITS	S1_bulk_W09	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
175932_16S - 7206_ITS	S1_bulk_W09	+	Rhizobium_leguminosarum_59_9	peripherals	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 8864_ITS	S1_bulk_W09	+	Rhizobium_leguminosarum_59_9	module_hub	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 9316_ITS	S1_bulk_W09	+	Rhizobium_leguminosarum_59_9	module_hub	Ascomycota; Dothideomycetes; Pleosporales; Sporormiaceae; Preussia; Preussia_flanagani
175932_16S - 8600_ITS	S1_rhizosphere_W09	+	Rhizobium_leguminosarum_59_9	module_hub	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
61972_16S - 8600_ITS	S1_rhizosphere_W09	+	Rhizobium_leguminosarum_59_9	module_hub	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
175932_16S - 8225_ITS	S1_rhizosphere_W12	+	Rhizobium_leguminosarum_59_9	module_hub	Ascomycota; Dothideomycetes; Pleosporales; Pleosporales_fam_Incertae_sedis; Polyschema; Polyschema_sclerotigenum
42846_16S - 8297_ITS	S1_rhizosphere_W12	+	Rhizobium_leguminosarum_59_9	module_hub	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
61972_16S - 7105_ITS	S1_rhizosphere_W12	-	Rhizobium_leguminosarum_59_9	module_hub	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
61972_16S - 7144_ITS	S1_rhizosphere_W12	-	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
64784_16S - 8225_ITS	S1_rhizosphere_W12	+	Rhizobium_leguminosarum_59_9	module_hub	Ascomycota; Dothideomycetes; Pleosporales; Pleosporales_fam_Incertae_sedis; Polyschema; Polyschema_sclerotigenum
175932_16S - 9061_ITS	S2_bulk_W03	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
175932_16S - 3036_ITS	S2_bulk_W06	+	Rhizobium_leguminosarum_59_9	module_hub	Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
175932_16S - 3516_ITS	S2_bulk_W06	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Leotiomyces; Helotiales; Helotiales_fam_Incertae_sedis; Chalara; Chalara_heteroderae
175932_16S - 6219_ITS	S2_bulk_W06	+	Rhizobium_leguminosarum_59_9	peripherals	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
175932_16S - 5292_ITS	S2_rhizosphere_W03	+	Rhizobium_leguminosarum_59_9	module_hub	Ascomycota; Sordariomyces; Hypocreales; Hypocreales_fam_Incertae_sedis; Acremonium; Acremonium_persicinum
2178_16S - 2464_ITS	S1_bulk_W09	+	Actinobacteria_70_13	peripherals	Chytridiomycota; Spizellomyces; Spizellomycetales; Spizellomycetaceae; Spizellomyces; unidentified
2178_16S - 1798_ITS	S1_rhizosphere_W09	+	Actinobacteria_70_13	module_hub	Ascomycota; Sordariomyces; Sordariales; Chaetomiaceae; Humicola; Humicola_grisea
2178_16S - 6390_ITS	S1_rhizosphere_W09	+	Actinobacteria_70_13	peripherals	Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified
2178_16S - 8077_ITS	S2_bulk_W06	+	Actinobacteria_70_13	peripherals	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
2178_16S - 4505_ITS	S2_rhizosphere_W03	+	Actinobacteria_70_13	peripherals	Basidiomycota; Agaricomycetes; unidentified; unidentified; unidentified; unidentified
2124_16S - 5498_ITS	S1_bulk_W0	+	Acidobacteria_68_21	peripherals	Ascomycota; Geoglossomycetes; Geoglossales; Geoglossaceae; unidentified; unidentified
2124_16S - 5498_ITS	S1_rhizosphere_W09	+	Acidobacteria_68_21	module_hub	Ascomycota; Geoglossomycetes; Geoglossales; Geoglossaceae; unidentified; unidentified
2124_16S - 5385_ITS	S1_rhizosphere_W12	+	Acidobacteria_68_21	peripherals	Ascomycota; Sordariomyces; Glomerellales; Plectosphaerellaceae; Gibellulopsis; Gibellulopsis_piscis
2124_16S - 8923_ITS	S2_rhizosphere_W09	+	Acidobacteria_68_21	peripherals	Ascomycota; Archaeorhizomycetes; Archaeorhizomycetales; Archaeorhizomycetaceae; Archaeorhizomyces; unidentified
13989_16S - 9061_ITS	S1_rhizosphere_W03	+	Mesorhizobium_63_15	peripherals	Ascomycota; Sordariomyces; unidentified; unidentified; unidentified; unidentified
13989_16S - 1902_ITS	S1_rhizosphere_W06	+	Mesorhizobium_63_15	module_hub	Chytridiomycota; Chytridiomycetes; unidentified; unidentified; unidentified; unidentified
13989_16S - 8225_ITS	S1_rhizosphere_W09	+	Mesorhizobium_63_15	peripherals	Ascomycota; Dothideomycetes; Pleosporales; Pleosporales_fam_Incertae_sedis; Polyschema; Polyschema_sclerotigenum
13989_16S - 8600_ITS	S1_rhizosphere_W09	+	Mesorhizobium_63_15	module_hub	unidentified; unidentified; unidentified; unidentified; unidentified; unidentified
13989_16S - 6236_ITS	S2_bulk_W03	+	Mesorhizobium_63_15	peripherals	Ascomycota; unidentified; unidentified; unidentified; unidentified; unidentified

\*Genome names inherited from Starr *et al.* 2020.

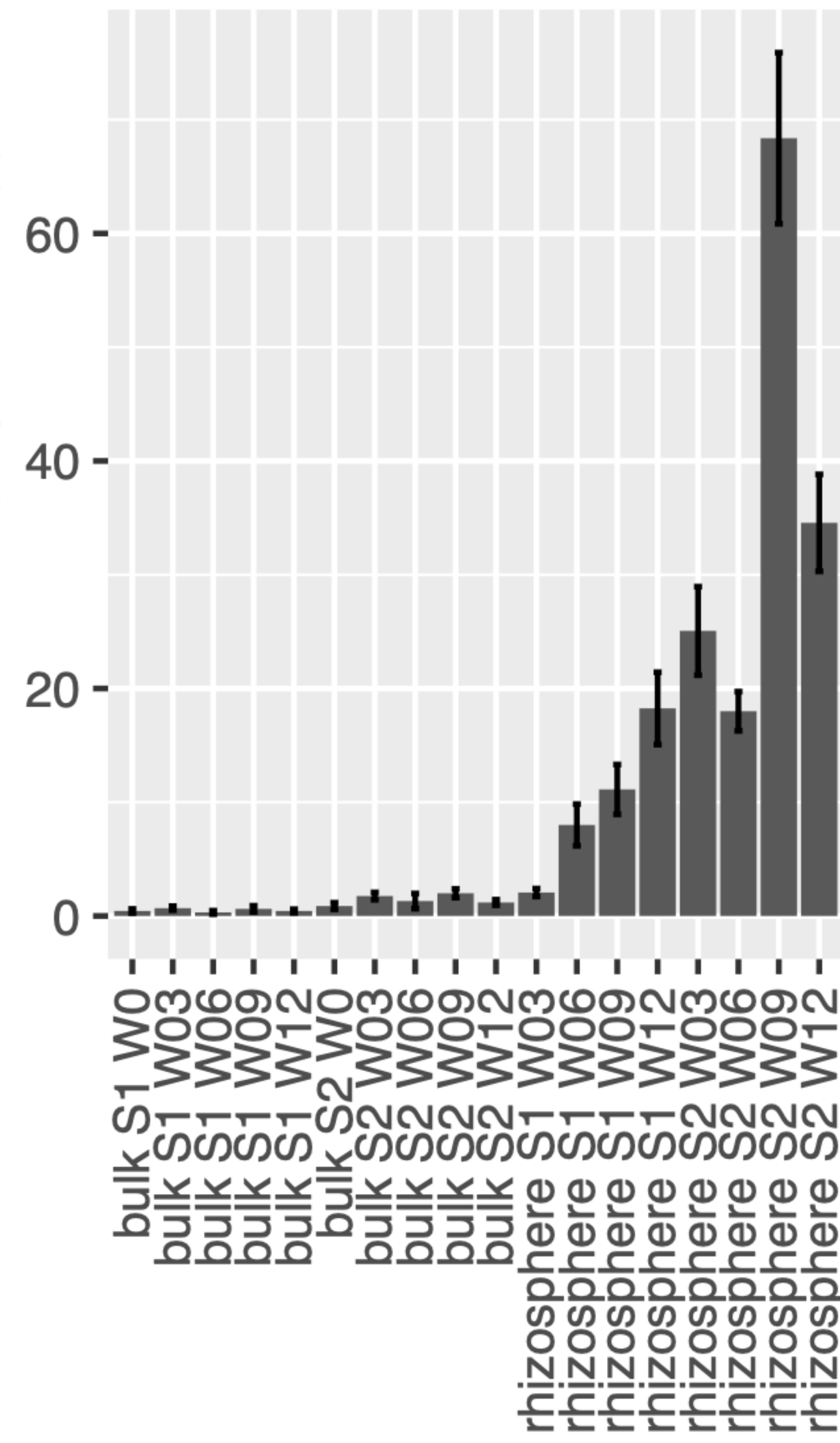
(a)

Aggregated abundance of four OTUs  
(175932, 42846, 61972 and 64784)



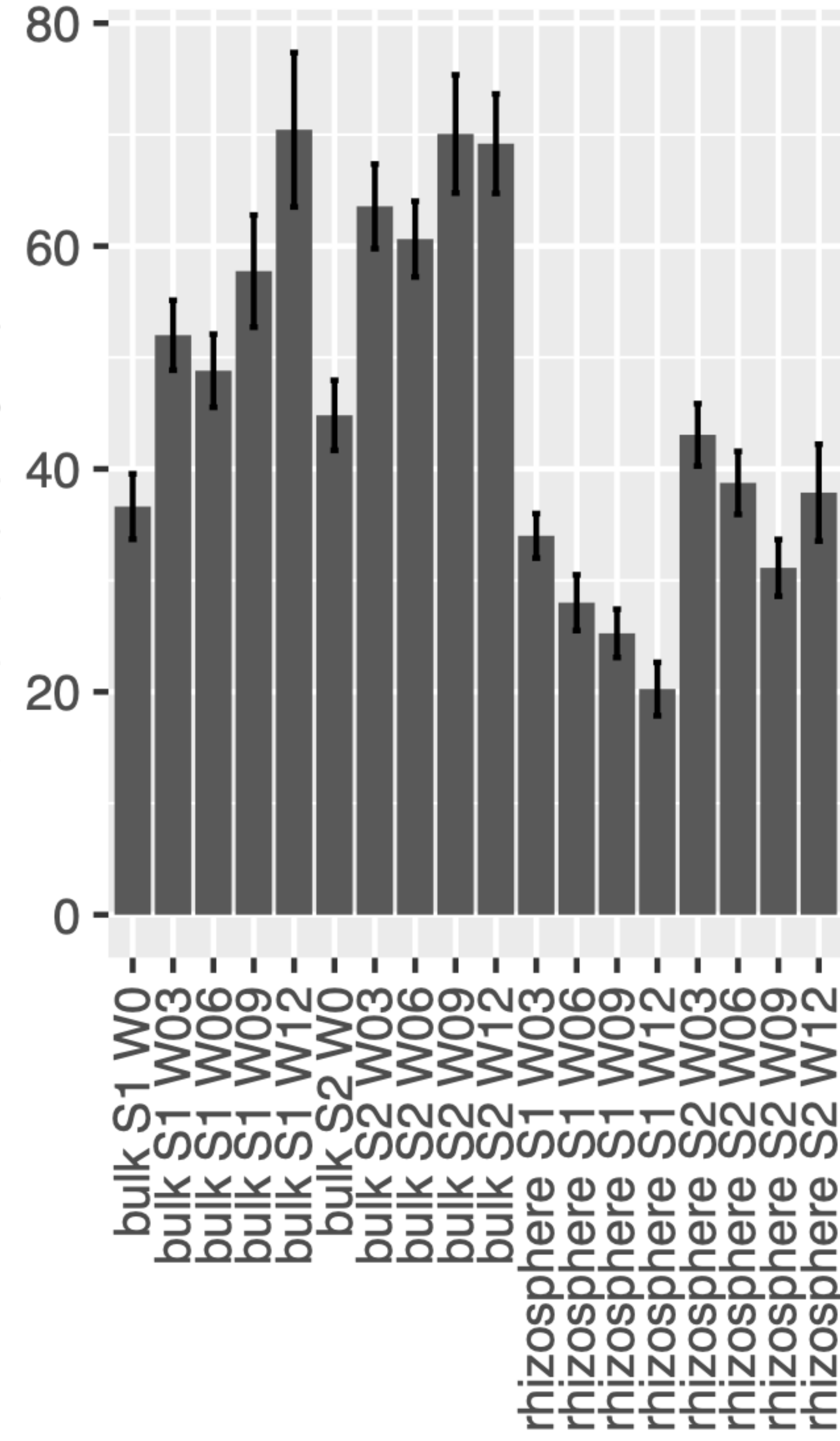
(b)

Abundance of OTU 13989



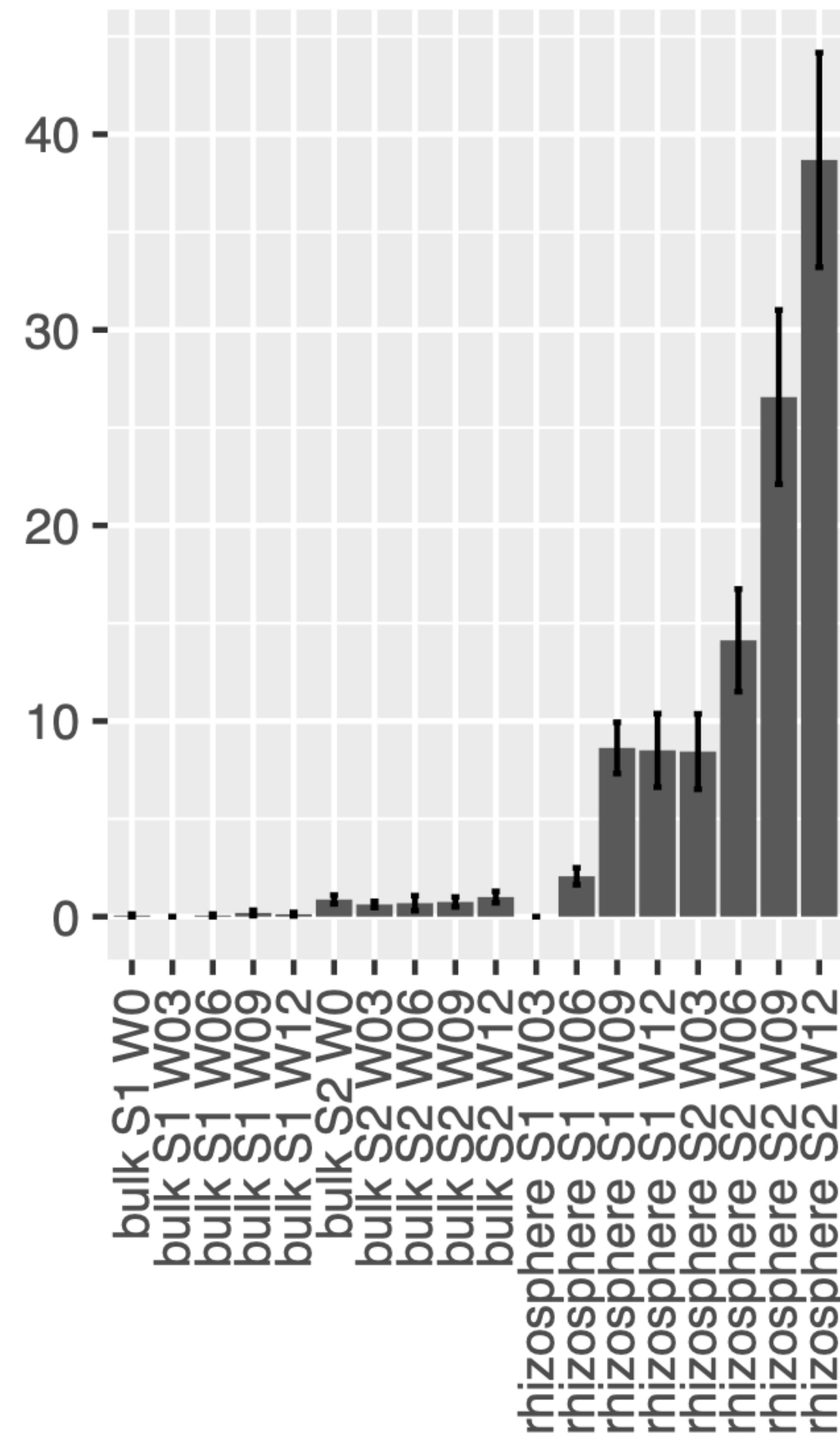
(c)

Abundance of OTU 2124



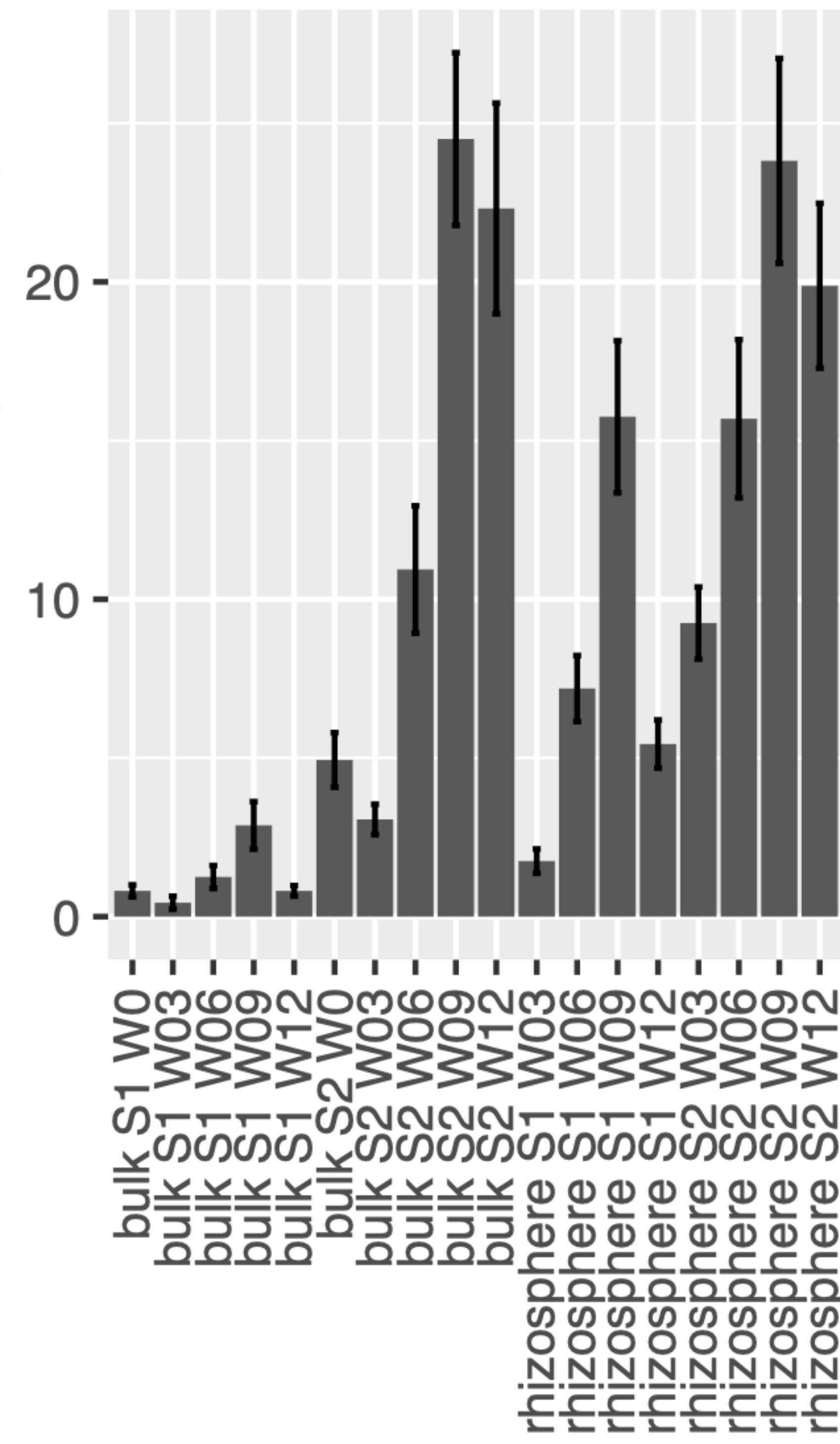
(d)

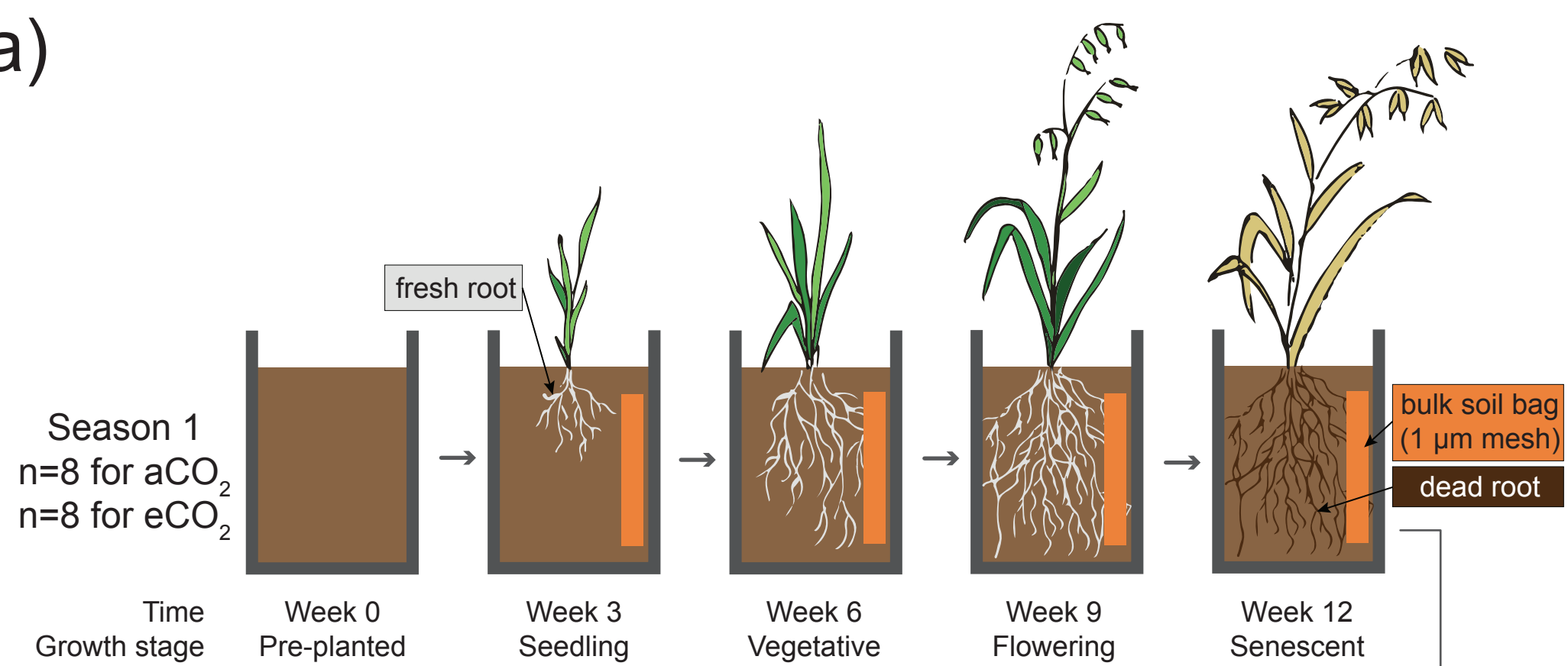
Abundance of OTU 7765



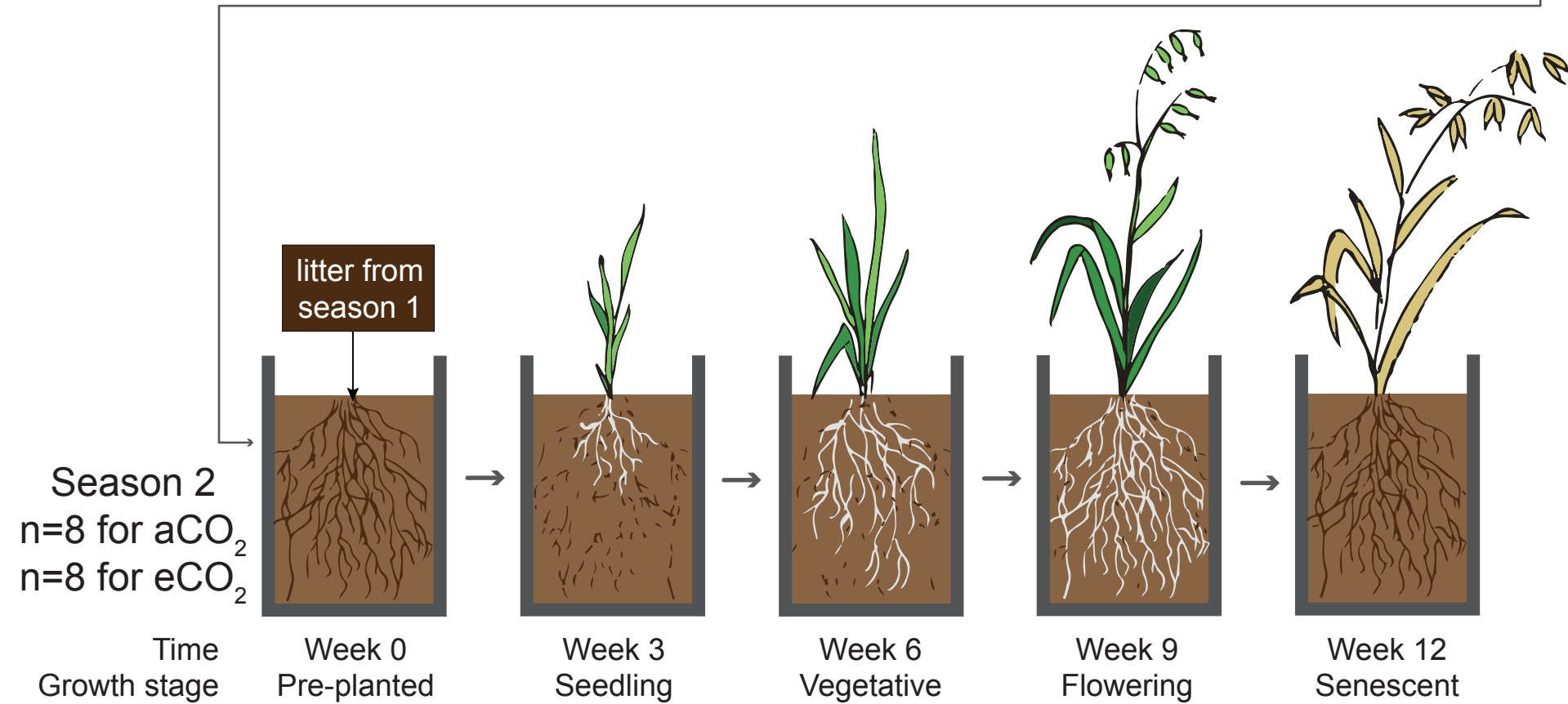
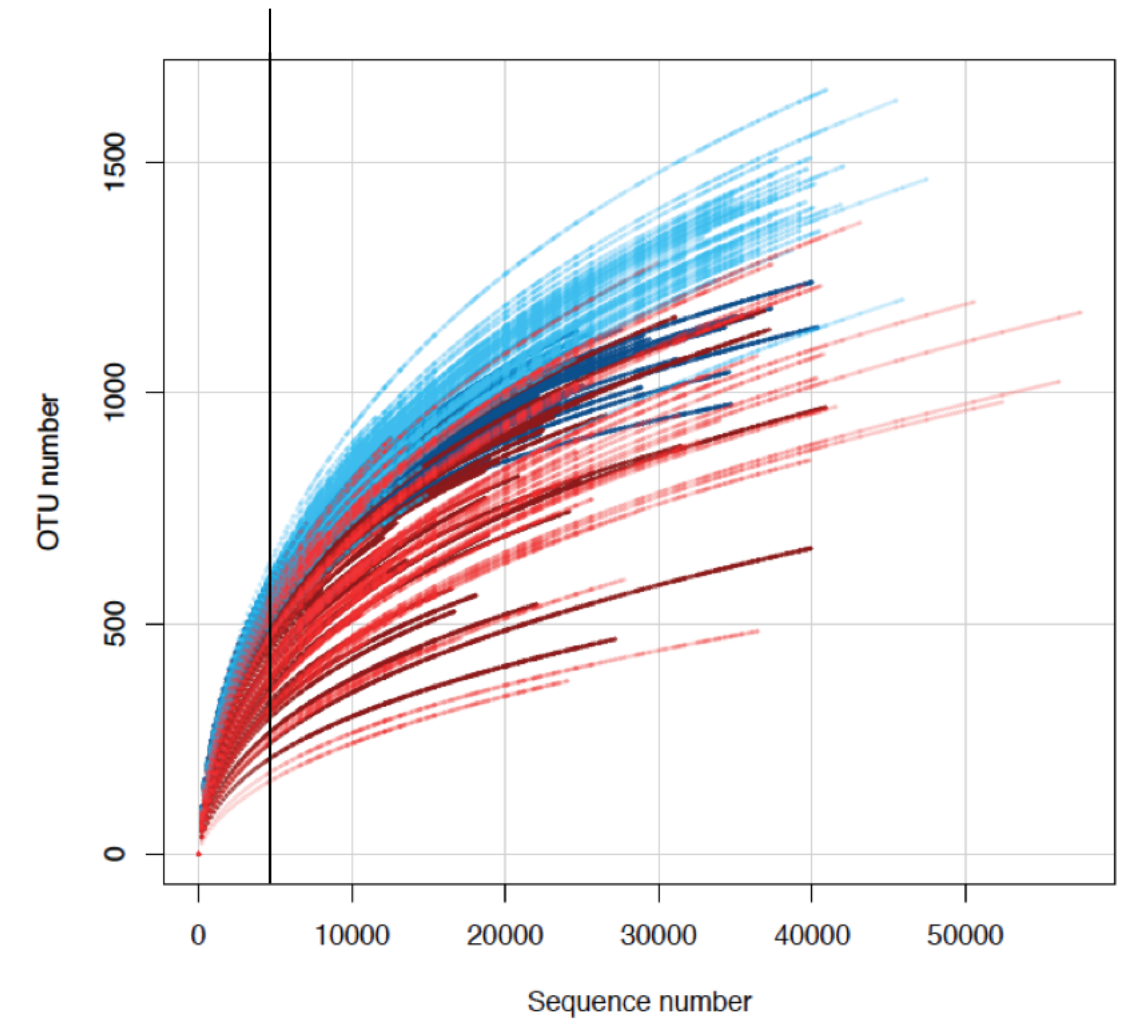
(e)

Abundance of OTU 2178



**(a)**

dead shoots removed, followed by 3 months dry season

**(b)**

- Season 1, bulk
- Season 1, rhizosphere
- Season 2, bulk + litter
- Season 2, rhizosphere + litter