

Table S1. Coordinates of sample sites (*Formica polyctena* anthills, from which ants were collected).

Mound ID:	Latitude:	Longitude:	Forest type:
113	54°48'6.51"N	17°53'59.46"E	coniferous
114	54°48'7.15"N	17°54'0.99"E	coniferous
115	54°46'43.79"N	17°51'53.22"E	coniferous
116	54°46'50.47"N	17°51'52.22"E	coniferous
117	54°46'50.32"N	17°51'55.80"E	coniferous
118	54°48'32.17"N	17°50'15.71"E	coniferous
119	54°48'33.35"N	17°50'16.84"E	coniferous
121	54°46'7.16"N	17°48'22.25"E	mixed
123	54°46'16.65"N	17°57'33.22"E	mixed
125	54°46'14.98"N	17°57'45.10"E	mixed
126	54°45'22.47"N	18° 0'31.01"E	mixed
127	52°15'43.78"N	20°53'31.05"E	mixed
128	52°15'44.54"N	20°53'29.04"E	mixed
130	52°15'46.06"N	20°53'23.70"E	mixed
131	52°15'46.24"N	20°53'24.34"E	mixed
132	52°15'46.48"N	20°53'22.57"E	mixed
133	52°15'46.76"N	20°53'21.66"E	mixed
134	52°15'47.47"N	20°53'19.48"E	mixed

Table S2. List of fungi isolated from *Formica polyctena* ants' cadavers.

Subphylum	Isolated taxa	Herbarium ID number	Morphotype number	GenBank Accession Number
Agaricomycotina	<i>Apiotrichum</i> sp.	WA50774	F8	MW577193
Mortierellomycotina	<i>Entomortierella beljakovae</i>	-	F10	MW550308
Mortierellomycotina	<i>Entomortierella</i> sp.	-	F59	MW553074
Mucoromycotina	<i>Absidia</i> sp.	WA50772	F11	MW577195
Mucoromycotina	<i>Mucor abundans</i>	WA50749	F44	MW577216
Mucoromycotina	<i>Mucor plumbeus</i>	WA50765	F18	-
Mucoromycotina	<i>Mucor</i> sp. (' <i>Mucor racemosus</i> group')	WA50735	F76	-
Mucoromycotina	<i>Mucor</i> sp. (' <i>Mucor racemosus</i> group')	WA50751	F40	MW577214
Mucoromycotina	<i>Rhizopus</i> sp.	-	F49	-
Mucoromycotina	<i>Rhizopus</i> sp.	-	F81	-
Mucoromycotina	<i>Rhizopus</i> sp.	-	F46	MW577349
Mucoromycotina	<i>Umbelopsis</i> sp.	WA50764	F20	MW577201
Pezizomycotina	<i>Akanthomyces</i> sp.	WA50741	F62	MW577223
Pezizomycotina	<i>Alternaria</i> sp.	WA50744	F54	MW577220
Pezizomycotina	<i>Arthrimum</i> sp.	WA50743	F56	MW577221
Pezizomycotina	<i>Botrytis</i> sp.	WA50740	F65	MW577224
Pezizomycotina	<i>Chaetomiaceae</i> sp.	WA50725	F113	MW577237
Pezizomycotina	<i>Arcopilus</i> sp.	WA50771	F5	MW577191

Pezizomycotina	<i>Didymellaceae sp.</i>	WA50723	F117	MW577238
Pezizomycotina	<i>Dothioraceae sp.</i>	WA50722	F118	MW577239
Pezizomycotina	<i>Fusarium sp.</i>	-	F7	MW550307
Pezizomycotina	<i>Fusarium sp.</i>	WA50770	F13	MW577196
Pezizomycotina	<i>Penicillium sp.</i>	WA50730	F91	MW577233
Pezizomycotina	<i>Penicillium soppii</i>	WA50779	F1	MW577188
Pezizomycotina	<i>Penicillium sp.</i>	WA50724	F114	MW575451
Pezizomycotina	<i>Penicillium sp.</i>	WA50737	F69	MW577227
Pezizomycotina	<i>Penicillium sp.</i>	WA50742	F61	MW577222
Pezizomycotina	<i>Penicillium sp.</i>	WA50748	F45	MW577217
Pezizomycotina	<i>Penicillium sp.</i>	WA50753	F38	MW577212
Pezizomycotina	<i>Penicillium sp.</i>	WA50757	F31	MW577208
Pezizomycotina	<i>Penicillium sp.</i>	WA50767	F16	MW577199
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	-	F28	MW550309
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	-	F29	MW550310
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	-	F98	MW550316
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50734	F78	MW577229
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50752	F39	MW577213
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50755	F36	MW577210
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50761	F23	MW577204
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50762	F22	MW577203
Pezizomycotina	<i>Penicillium sp. (sct. Aspergilloides)</i>	WA50777	F3	MW577189
Pezizomycotina	<i>Penicillium sp. (sct. Brevicompacta)</i>	WA50732	F87	MW577231
Pezizomycotina	<i>Penicillium sp. (sct. Brevicompacta)</i>	WA50736	F71	MW577228
Pezizomycotina	<i>Penicillium sp. (sct. Brevicompacta)</i>	WA50750	F43	MW577215
Pezizomycotina	<i>Penicillium sp. (sct. Brevicompacta)</i>	WA50773	F9	MW577194
Pezizomycotina	<i>Penicillium sp. (sct. Citrina)</i>	WA50760	F25	MW577205
Pezizomycotina	<i>Penicillium sp. (sct. Exilicaulis)</i>	WA50733	F84	MW577230
Pezizomycotina	<i>Penicillium sp. (sct. Exilicaulis)</i>	WA50776	F4	MW577190
Pezizomycotina	<i>Penicillium sp. (sct. Fasciculata)</i>	WA50739	F66	MW577225
Pezizomycotina	<i>Penicillium sp. (sct. Fasciculata)</i>	WA50766	F17	MW577200
Pezizomycotina	<i>Penicillium sp. (sct. Lanata-Divaricata)</i>	WA50763	F21	MW577202
Pezizomycotina	<i>Pseudogymnoascus sp.</i>	WA50729	F94	MW577234
Pezizomycotina	<i>Scorias sp.</i>	-	F107	MW550318
Pezizomycotina	<i>Talaromyces sp.</i>	WA50759	F26	MW577206
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F42	MW550311
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F48	MW550312
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F53	MW550313
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F74	MW550314
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F92	MW550315
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	-	F104	MW550317
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	WA50726	F109	MW577236
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	WA50731	F90	MW577232
Pezizomycotina	<i>Trichoderma sp. (sct. Trichoderma)</i>	WA50745	F52	MW577219

Pezizomycotina	<i>Trichoderma sp.</i> (sct. Trichoderma)	WA50754	F37	MW577211
Pezizomycotina	<i>Trichoderma sp.</i> (sct. Trichoderma)	WA50756	F32	MW577209
Pezizomycotina	<i>Trichoderma sp.</i> (sct. Trichoderma)	WA50768	F15	MW577198
Pezizomycotina	<i>Trichoderma sp.</i> (sct. Trichoderma)	WA50769	F14	MW577197
Pezizomycotina	<i>Trichoderma sp.</i> (sct. Trichoderma)	WA50775	F6	MW577192
Saccharomycotina	<i>Candida sp.</i>	WA50721	F120	MW553041
Saccharomycotina	<i>Candida sp.</i>	WA50727	F103	MW575450
Saccharomycotina	<i>Schwanniomyces sp.</i>	WA50728	F95	MW577235
Saccharomycotina	<i>Schwanniomyces sp.</i>	WA50738	F68	MW577226
Saccharomycotina	<i>Schwanniomyces sp.</i>	WA50746	F51	MW577218
Saccharomycotina	<i>Schwanniomyces sp.</i>	WA50747	F50	MW592383
Saccharomycotina	<i>Schwanniomyces sp.</i>	WA50758	F30	MW577207