

**(Supplementary) Table 1** Operational taxonomic units of EMF associated with *Pinus ponderosa*

Site	Tree #	Sample #	GenBank Accession #	Analysis Name	Max Identity
4380	1	223	KT800061	<i>Inocybe</i> sp.	92%
4380	2	244	KT800065	<i>Cenococcum</i> cf. <i>geophilum</i>	97%
4380	2	240	KT800063	<i>Gautieria</i> sp. 2	94%
4380	2	245	KT800066	<i>Inocybe</i> sp. 14	94%
4380	2	241	KT800064	<i>Piloderma</i> sp. 20	90%
4380	3	216	KT800058	<i>Cenococcum</i> sp.	95%
4380	3	219	KT800060	<i>Piloderma</i> sp. 3	91%
4380	3	213	KT800057	<i>Rhizopogon</i> cf. <i>salebrosus</i>	97%
4380	3	217	KT800059	<i>Tomentella</i> sp. 2	92%
4380	6	234	KT800062	<i>Tomentella</i> sp. 4	94%
4380	7	211	KT800056	<i>Inocybe</i> sp.	91%
BHB	1	560	KT800074	<i>Cenococcum</i> sp.	96%
BHB	1	567	KT800077	<i>Cortinarius</i> sp.	94%
BHB	1	559	KT800073	<i>Rhizopogon</i> cf. <i>luteorubescens</i>	98%
BHB	1	563	KT800076	<i>Rhizopogon</i> <i>salebrosus</i>	98%
BHB	1	561	KT800075	<i>Tricholoma</i> sp. 6	89%
BHB	1	558	KT800072	<i>Tricholoma</i> cf. <i>myomyces</i>	99%
BHB	2	580	KT800080	<i>Cenococcum</i> cf. <i>geophilum</i>	97%
BHB	2	585	KT800084	Pyronemataceae sp. 2	88%
BHB	2	581	KT800081	<i>Inocybe</i> sp. 2	94%
BHB	2	582	KT800082	<i>Rhizopogon</i> sp.12	96%
BHB	2	583	KT800083	<i>Tomentella</i> sp. 2b	92%
BHB	3	554	KT800070	<i>Piloderma</i> sp. 24	91%
BHB	3	556	KT800071	<i>Tomentella</i> sp. 2a	94%
BHB	5	569	KT800078	<i>Phialocephala</i> sp. 6	95%
BHB	5	572	KT800079	<i>Suillus</i> cf. <i>pseudobrevipes</i>	97%
BHB	6	541	KT800067	<i>Inocybe</i> sp. 1	93%
BHB	6	544	KT800068	<i>Piloderma</i> sp. 3	91%
BHB	6	545	KT800069	<i>Suillus</i> <i>brevipes</i>	99%
C1	1	202	KT800095	<i>Rhizopogon</i> sp. 15	94%
C1	3	179	KT800087	<i>Rhizopogon</i> cf. <i>salebrosus</i>	98%
C1	3	177	KT800086	<i>Thelephora</i> cf. <i>terrestris</i>	98%
C1	3	171	KT800085	<i>Tomentella</i> sp. 7	97%
C1	6	195	KT800093	<i>Gymnomyces</i> sp. 1	96%
C1	6	192	KT800091	<i>Gymnomyces</i> sp. 2	85%
C1	6	194	KT800092	<i>Piloderma</i> sp. (clone 9)	99%
C1	7	196	KT800094	<i>Hebeloma</i> sp. 1	98%

C1	4	187	KT800088	<i>Inocybe</i> sp. 6	91%
C1	4	188	KT800089	<i>Cortinarius</i> sp. 9	94%
C1	4	189	KT800090	<i>Rhizopogon</i> sp. 5	93%
C4-ER	3	153	KT800102	<i>Piloderma</i> sp. 2	99%
C4-ER	3	155	KT800103	<i>Russula</i> sp. 4	97%
C4-ER	4	136	KT800098	<i>Boletopsis</i> sp. 1	95%
C4-ER	4	131	KT800096	<i>Boletopsis</i> cf. <i>grisea</i>	97%
C4-ER	4	132	KT800097	<i>Rhizopogon</i> sp. 20	96%
C4-ER	5	146	KT800100	<i>Cenococcum</i> sp.	92%
C4-ER	5	140	KT800099	<i>Inocybe auricoma</i>	99%
C4-ER	6	M149	KT800109	<i>Inocybe</i> cf. <i>flocculosa</i>	99%
C4-ER	6	148	KT800101	<i>Leucogaster</i> sp. 1	88%
C4-ER	7	163	KT800104	<i>Amphinema</i> sp. 5	94%
C4-ER	7	166	KT800106	<i>Amphinema</i> sp. 8	96%
C4-ER	7	164	KT800105	Hydnaceae sp. 1	93%
C4-ER	7	168	KT800107	<i>Inocybe</i> sp. 16	99%
C4-ER	7	169	KT800108	<i>Rhizopogon</i> sp. 4	94%
C6A	1	31	KT800110	<i>Inocybe jacobii</i>	99%
C6A	1	34	KT800111	<i>Rhizopogon</i> sp. 8	88%
C6A	2	762	KT800113	<i>Amphinema</i> sp. 7	92%
C6A	2	761	KT800112	<i>Rhizopogon</i> sp. 8	93%
C6A	3	770	KT800119	<i>Cenococcum</i> sp.	95%
C6A	4	763	KT800114	<i>Rhizopogon</i> sp.	97%
C6A	5	769	KT800118	<i>Hysterangium</i> sp. 2	82%
C6A	5	767	KT800117	<i>Phialocephala fortinii</i>	83%
C6A	5	766	KT800116	<i>Piloderma</i> sp. 6	92%
C6A	5	765	KT800115	<i>Piloderma</i> sp. 9	90%
C6B	1	96	KT800125	<i>Amphinema</i> sp. 5	97%
C6B	1	95	KT800124	<i>Cadophora</i> sp. 2	96%
C6B	1	94	KT800123	<i>Inocybe</i> sp. 3	96%
C6B	1	97	KT800126	<i>Suillus</i> sp.	99%
C6B	4	98	KT800127	<i>Cenococcum</i> sp.	81%
C6B	4	99	KT800128	<i>Clavulina</i> sp. 1	96%
C6B	4	101	KT800129	<i>Rhizopogon arctostaphyli</i>	99%
C6B	5	104	KT800130	<i>Russula albonigra</i>	99%
C6B	6	93	KT800122	<i>Sistotrema</i> sp.	97%
C6B	6	91	KT800121	<i>Tricholoma</i> sp. 5	87%
C6B	7	90	KT800120	<i>Russula cascadenis</i>	99%

C7	1	291	KT800143	<i>Amphinema</i> sp. 6	97%
C7	1	289	KT800142	<i>Rhizopogon</i> sp. 7	96%
C7	4	264	KT800135	<i>Piloderma</i> sp. 21	93%
C7	4	266	KT800137	<i>Tomentellopsis</i> sp. 1	95%
C7	4	265	KT800136	<i>Wilcoxina</i> sp. 1	97%
C7	5	255	KT800133	<i>Piloderma</i> sp. 13	81%
C7	5	257	KT800134	<i>Rhizopogon</i> sp. 9	97%
C7	6	281	KT800141	<i>Cortinarius</i> sp. 4	92%
C7	6	279	KT800139	<i>Rhizopogon</i> cf. <i>arctostaphyli</i>	97%
C7	6	280	KT800140	<i>Tomentella</i> sp.	92%
C7	6	276	KT800138	<i>Tricholoma</i> sp. 1	85%
C7	7	253	KT800132	<i>Cenococcum</i> sp.	95%
C7	7	M248	KT800144	<i>Inocybe</i> sp. 9	97%
C7	7	251	KT800131	<i>Russula</i> sp. 3	87%
C8	1	15	KT800145	<i>Cortinarius</i> cf. <i>bibulus</i>	99%
C8	1	20	KT800146	<i>Rhizopogon</i> cf. <i>ochraceorubens</i>	98%
C8	2	27	KT800149	<i>Cenococcum geophilum</i>	99%
C8	2	30	KT800151	<i>Gautieria</i> sp. 1	91%
C8	2	29	KT800150	<i>Suillus</i> sp. 1	77%
C8	3	21	KT800147	<i>Rhizopogon</i> sp.	96%
C8	3	26	KT800148	<i>Wilcoxina</i> sp. R3193	99%
C8	5	53	KT800153	<i>Lactarius</i> sp. 2	97%
C8	5	56	KT800154	<i>Piloderma</i> sp. 11	84%
C8	5	48	KT800152	<i>Rhizopogon</i> sp.	99%
C8	4	45	KT800158	<i>Amphinema</i> sp. 9	99%
C8	4	38	KT800157	<i>Rhizopogon arctostaphyli</i>	99%
C8	4	36	KT800155	<i>Suillus</i> sp. 2 (≠ 37)	96%
C8	4	37	KT800156	<i>Suillus</i> cf. <i>pseudobrevipes</i>	99%
DL	1	613	KT800174	<i>Cortinarius</i> sp. 11	93%
DL	1	610	KT800172	<i>Cortinarius</i> sp.	90%
DL	1	611	KT800173	<i>Cortinarius</i> sp.	89%
DL	1	606	KT800170	<i>Rhizopogon</i> sp. 14	95%
DL	1	603	KT800169	<i>Tricholoma</i> sp. 7	86%
DL	2	597	KT800159	<i>Cenococcum</i> sp. <i>geophilum</i>	97%
DL	2	601	KT800167	Pyronemataceae sp.	96%
DL	2	598	KT800164	<i>Inocybe</i> sp.	85%
DL	2	602	KT800168	<i>Rhizopogon</i> cf. <i>salebrosus</i>	98%
DL	2	599	KT800165	<i>Tomentella</i> sp. 1	95%
DL	2	600	KT800166	<i>Tricholoma</i> cf. <i>myomyces</i>	98%

DL	3	594	KT800161	<i>Cortinarius</i> sp. 6	96%
DL	3	595	KT800162	<i>Hebeloma</i> sp. 2	91%
DL	3	593	KT800160	<i>Hysterangium</i> sp. 3	76%
DL	4	M629	KT800178	<i>Inocybe</i> sp. 13	97%
DL	4	625	KT800163	<i>Inocybe</i> sp. 3	94%
DL	7	616	KT800176	<i>Cortinarius</i> cf. <i>diasemospermus</i>	98%
DL	7	623	KT800177	<i>Inocybe</i> sp. 7	93%
DL	7	615	KT800175	<i>Inocybe</i> sp. (clone 9)	99%
DL	7	619	KT800179	<i>Tomentella</i> sp. 2	93%
Fin. Butte	1	758	KT800199	<i>Cenococcum</i> sp.	94%
Fin. Butte	1	759	KT800197	<i>Cortinarius</i> sp. 8	78%
Fin. Butte	1	M750	KT800198	<i>Inocybe</i> cf. <i>flocculosa</i>	99%
Fin. Butte	1	753	KT800194	<i>Lactarius</i> sp. 3	96%
Fin. Butte	1	752	KT800193	<i>Phialocephala</i> sp. 1	85%
Fin. Butte	1	757	KT800196	<i>Rhizopogon</i> sp. 6	95%
Fin. Butte	1	754	KT800195	Thelephoraceae sp. 4	93%
Fin. Butte	2	738	KT800185	<i>Piloderma</i> sp. 5	90%
Fin. Butte	2	739	KT800186	<i>Russula</i> sp. 2	92%
Fin. Butte	2	741	KT800187	<i>Tricholoma</i> sp. 8	79%
Fin. Butte	3	743	KT800189	<i>Clavulina</i> sp. 2	97%
Fin. Butte	3	749	KT800192	Clavulinaceae sp. 3	89%
Fin. Butte	3	745	KT800191	<i>Cortinarius</i> sp.	98%
Fin. Butte	3	744	KT800190	<i>Piloderma</i> sp. 8	87%
Fin. Butte	3	746	KT800188	<i>Rhizopogon</i> sp.	96%
Fin. Butte	4	735	KT800182	<i>Inocybe</i> sp.	85%
Fin. Butte	4	730	KT800180	<i>Piloderma</i> sp. 10	87%
Fin. Butte	4	732	KT800181	<i>Piloderma</i> cf. <i>fallax</i>	98%
Fin. Butte	7	736	KT800183	<i>Inocybe</i> sp. 4	79%
Fin. Butte	7	737	KT800184	<i>Cenococcum</i> sp.	94%
Fire	1	686	KT800202	Atheliaceae sp. 3	82%
Fire	1	685	KT800201	<i>Cortinarius</i> sp. 5	90%
Fire	1	684	KT800200	<i>Inocybe</i> sp. 15	89%
Fire	2	690	KT800204	<i>Cenococcum</i> sp.	93%
Fire	2	688	KT800203	<i>Cortinarius</i> sp. 1	91%
Fire	2	694	KT800205	<i>Cortinarius</i> sp.	90%
Fire	3	703	KT800209	<i>Inocybe</i> sp.	90%
Fire	3	704	KT800210	<i>Cortinarius</i> sp.	96%
Fire	3	702	KT800208	<i>Inocybe</i> sp.	94%
Fire	4	705	KT800211	<i>Piloderma</i> sp. 15	82%
Fire	4	706	KT800212	<i>Tomentella</i> sp. 3	94%
Fire	5	697	KT800207	<i>Hebeloma</i> cf. <i>velutipes</i>	98%

Fire	5	M696	KT800213	<i>Inocybe cf. flocculosa</i>	99%
Fire	5	695	KT800206	<i>Rhizopogon</i> sp.	95%
Hwy31	3	113	KT800215	<i>Rhizopogon cf. salebrosus</i>	98%
Hwy31	3	111	KT800214	<i>Wilcoxina cf. rehmii</i>	99%
Hwy31	4	114	KT800216	<i>Cenococcum</i> sp.	97%
Hwy31	5	124	KT800219	<i>Inocybe</i> sp.	94%
Hwy31	5	125	KT800220	<i>Rhizopogon</i> sp. 17	95%
Hwy31	7	122	KT800218	<i>Inocybe</i> sp. 18	98%
Hwy31	7	121	KT800217	<i>Tomemtella</i> sp. 5	92%
Ice Cave	1	513	KT800228	<i>Amphinema</i> sp.10	92%
Ice Cave	1	511	KT800227	<i>Inocybe</i> sp.	97%
Ice Cave	1	514	KT800229	<i>Lactarius cf. deliciosus</i>	98%
Ice Cave	2	522	KT800236	<i>Amphinema</i> sp. 2	86%
Ice Cave	2	515	KT800230	<i>Cortinarius</i> sp.	87%
Ice Cave	2	521	KT800235	<i>Inocybe</i> sp.	98%
Ice Cave	2	520	KT800234	<i>Piloderma</i> sp. 14	90%
Ice Cave	2	518	KT800232	<i>Piloderma</i> sp. 7	94%
Ice Cave	2	517	KT800231	<i>Rhizopogon cf. ochraceorubens</i>	98%
Ice Cave	2	519	KT800233	<i>Rhizopogon</i> sp.	97%
Ice Cave	3	504	KT800223	<i>Cenococcum</i> sp.	92%
Ice Cave	3	505	KT800224	<i>Rhizopogon</i> sp.	97%
Ice Cave	3	508	KT800225	<i>Rhizopogon</i> sp.	96%
Ice Cave	3	510	KT800226	<i>Tomentella</i> sp. 8	96%
Ice Cave	4	499	KT800221	<i>Inocybe</i> sp.	87%
Ice Cave	4	503	KT800222	<i>Tomentella</i> sp. 2	94%
Ice Cave	6	528	KT800238	<i>Lactarius</i> sp.	97%
Ice Cave	6	523	KT800237	<i>Suillus</i> sp.	97%
KB	1	62	KT800239	<i>Cenococcum geophilum</i>	99%
KB	1	64	KT800241	<i>Inocybe</i> sp.	90%
KB	1	63	KT800240	<i>Rhizopogon arctostaphyli</i>	100%
KB	3	84	KT800249	<i>Lactarius deliciosus</i>	100%
KB	3	82	KT800248	<i>Piloderma</i> sp. 12	90%
KB	3	83	KT800242	<i>Rhizopogon salebrosus</i>	99%
KB	3	87	KT800250	<i>Wilcoxina rehmii</i>	99%
KB	4	79	KT800247	<i>Hyaloscyphaceae</i> sp. 2	92%
KB	4	78	KT800246	<i>Inocybe</i> sp. 3	96%
KB	5	68	KT800243	<i>Phialocephala fortini</i>	98%
KB	7	69	KT800244	<i>Cortinarius</i> sp.	95%
KB	7	74	KT800245	<i>Tricholoma cf. myomyces</i>	98%

LB	1	423	KT800252	<i>Piloderma cf. fallax</i>	98%
LB	1	422	KT800251	<i>Suillus cf. pseudobrevipes</i>	98%
LB	2	424	KT800253	<i>Inocybe cf. jacobi</i>	98%
LB	2	427	KT800254	Pezizaceae sp.	88%
LB	3	435	KT800255	<i>Rhizopogon cf. salebrosus</i>	98%
LB	4	440	KT800256	<i>Rhizopogon</i> sp. 3	95%
Mof. Butte	2	303	KT800262	<i>Rhizopogon</i> sp.	96%
Mof. Butte	2	312	KT800266	<i>Rhizopogon salebrosus</i>	99%
Mof. Butte	2	308	KT800265	<i>Tomentella</i> sp. 2	92%
Mof. Butte	2	306	KT800264	<i>Tomentella</i> sp.	89%
Mof. Butte	2	307	KT800259	<i>Tricholoma cf. myomyces</i>	99%
Mof. Butte	2	302	KT800261	<i>Wilcoxina</i> sp. 2	97%
Mof. Butte	2	304	KT800263	<i>Wilcoxina</i> sp. 1	97%
Mof. Butte	3	M296	KT800267	<i>Inocybe cf. flocculosa</i>	98%
Mof. Butte	3	297	KT800257	<i>Tomentella</i> sp. 1	98%
Mof. Butte	3	299	KT800258	<i>Tomentella</i> sp. 2	98%
Mof. Butte	3	301	KT800260	<i>Tomentellopsis</i> sp. 2	93%
PB	1	373	KT800278	<i>Cortinarius</i> sp.	97%
PB	1	371	KT800277	<i>Piloderma</i> sp. 4	95%
PB	2	362	KT800274	<i>Cenococcum</i> sp.	96%
PB	2	364	KT800275	<i>Cortinarius</i> sp.	99%
PB	2	367	KT800276	<i>Rhizopogon cf. luteorubescens</i>	98%
PB	4	M333	KT800279	<i>Inocybe</i> sp.	96%
PB	4	331	KT800268	<i>Laccaria amethysteo-occidentalis</i>	99%
PB	4	328	KT800269	<i>Rhizopogon cf. arctostaphyli</i>	98%
PB	6	336	KT800270	<i>Inocybe</i> sp. 4	96%
PB	6	340	KT800272	<i>Lactarius deliciosus</i>	98%
PB	6	342	KT800273	<i>Rhizopogon ochraceorubens</i>	99%
PB	6	338	KT800271	<i>Rhizopogon cf. salebrosus</i>	98%