

Table S1. Information on sequences used in molecular phylogenetic analyses for *Otidea*.

Note: “—” shows no sequence in the GenBank database. GenBank accession numbers for sequences generated in this study are in boldface.

Species name	Specimen voucher	Locality	ITS	LSU	<i>efl-a</i>	<i>rpb2</i>
<i>Monascella botryosa</i>	CBS 233.85	Spain	MH861870	MH873558	KC109256	JX943831
<i>O. adorniae</i>	MCVE 30102	Italy	MK850486	MK850502	—	—
<i>O. adorniae</i>	MCVE 30106	Italy	MK850484	MK850500	—	—
<i>O. adorniae</i>	MCVE 30105	Italy	MK850483	MK850499	—	—
<i>O. alutacea</i>	S-F257085	Italy	KM010069	KM823192	KM823260	KM823386
<i>O. alutacea</i>	FLAS-F59409	Pakistan	MN495935	MN493146	—	—
<i>O. alutacea</i>	KH.09.133	Norway	KM010071	KM823185	KM823253	KM823381
<i>O. alutacea</i>	ARAN A3023204	Spain	KM010072	KM823186	KM823254	KM823382
<i>O. alutacea</i>	S-F257084	Italy	KM010075	KM823464	—	—
<i>O. alutacea</i>	OSC 56777	USA	AF072071	AF086582	—	—
<i>O. alutacea</i>	OSC 56798	USA	AF072072	AF086583	—	—
<i>O. alutacea</i>	OSC 56747	USA	AF072070	KM823189	KM823257	—
<i>O. alutacea</i>	OSC 56770	USA	AF072073	AF086585	—	—
<i>O. alutacea</i>	KH.09.135	Norway	KM010064	KM823190	KM823258	KM823384
<i>O. alutacea</i>	KH.10.198	Sweden	KM010065	KM823459	—	—
<i>O. alutacea</i>	KH.13.50	Sweden	KM010076	KM823465	—	—
<i>O. alutacea</i>	JS.08.43	Sweden	KM010063	KM823458	—	—
<i>O. alutacea</i>	KH.09.178	Sweden	KM010066	KM823191	KM823259	KM823385
<i>O. alutacea</i>	K(M)142010	England	KT818924	—	—	—
<i>O. alutacea</i>	KS-94-192	Denmark	KM010067	KM823460	—	—
<i>O. alutacea</i>	Moorefun19	USA	KM010070	KM823194	KM823262	KM823387
<i>O. alutacea</i>	OSC 56782	USA	AF072076	AF086586	—	—
<i>O. alutacea</i>	OSC 56813	USA	AF072075	AF086584	—	—
<i>O. alutacea</i>	OSC 56758	USA	AF072074	KM823193	KM823261	—
<i>O. alutacea</i>	KH.07.46	Denmark	KM010061	KM823457	—	—
<i>O. alutacea</i>	C-F-48045	Sweden	KM010068	KM823461	—	—
<i>O. alutacea</i>	WZ 2123 (HMAS 72058)	China	KU987013	KU987025	—	—
<i>O. alutacea</i>	WZ 2128 (HMAS 72057)	China	KU987014	KU987026	—	OM792167
<i>O. alutacea</i>	HMAS 52742	China	ON520743	DQ443438	—	ON550460
<i>O. alutacea</i>	HMAS 57844	China	ON520778	DQ443439	ON550447	ON550461
<i>O. apophysata</i>	S-F257062	Germany	KM010077	KM823196	KM823264	KM823389
<i>O. aspera</i>	HMJAU 4166	China	OM743958	OM743964	OM792154	OM792174
<i>O. aspera</i>	HSA 278	China	OM743960	OM743951	OM792153	OM792175
<i>O. aspera</i>	HSA 251	China	—	ON520898	ON550448	ON567204
<i>O. bomiensis</i>	HMAS 52743	China	ON544012	ON552240	ON550449	ON550462
<i>O. bomiensis</i>	HMAS 75178	China	ON550579	ON552242	ON550450	ON550463
<i>O. borealis</i>	S-F242694	Finland	KM010023	KM823197	KM823265	KM823390
<i>O. brevispora</i>	HMAS 83551	China	OM792189	OM722134	OM792148	OM792168
<i>O. brunneoparva</i>	KH.08.107	Sweden	KM010026	KM823200	KM823268	KM823393
<i>O. brunneoparva</i>	S-F257086	Finland	KM010025	KM823199	KM823267	KM823392
<i>O. bufonia</i>	KH.07.37	Denmark	JN942767	JN941098	KC109262	JN993552
<i>O. bufonia</i>	KH.09.172	Sweden	JN942764	JN941097	KM823272	KM823397
<i>O. bufonia</i>	KH.09.248	Spain	JN942766	JN941084	KM823269	KM823394
<i>O. bufonia</i>	KH.09.249	France	KM010079	KM823201	KM823271	KM823396

<i>O. caeruleopruinosa</i>	H6010805	Finland	KF717575	KM823202	KM823273	KM823398
<i>O. caeruleopruinosa</i>	MT 10082601	Spain	KM010030	KM823203	—	KM823399
<i>O. cantharella</i>	KH.09.125	Sweden	KM010084	KM823205	KM823274	KM823401
<i>O. cantharella</i>	NV 2008.09.16	France	KM010085	KM823204	—	KM823400
<i>O. concinna</i>	KH.09.250	Spain	JN942775	JN941095	KM823276	KM823403
<i>O. concinna</i>	KH.09.183	Sweden	KM010032	JN941089	KM823275	KM823402
<i>O. cupulata</i>	HSA 406	China	OM743959	OM743970	OM792165	OM792177
<i>O. cupulata</i>	HSA 218	China	OM743973	OM743954	OM792166	OM792176
<i>O. daliensis</i>	SEST-06081702	Spain	KM010086	KM823206	KM823277	KM823404
<i>O. filiformis</i>	HMAS 188468	China	OM743949	OM743955	OM792155	OM792178
<i>O. filiformis</i>	BJTC C505	China	MW554241	OM743968	OM792156	OM792179
<i>O. filiformis</i>	BJTC L482	China	MW554466	OM743963	OM792157	OM792180
<i>O. flavidobrunneola</i>	H6010806	Finland	KF717576	KM823209	KM823279	KM823407
<i>O. flavidobrunneola</i>	KH.09.153	Norway	KM010088	KM823207	—	KM823405
<i>O. formicarum</i>	JS.08.63	Sweden	KM010035	KM823212	KM823282	—
<i>O. formicarum</i>	H6003549	Finland	KF717577	KM823211	KM823281	KM823409
<i>O. formicarum</i>	S-F244372	Norway	KM010034	KM823210	KM823280	KM823408
<i>O. gongnaisiensis</i>	HMAS 69951	China	ON550580	ON552243	ON550451	ON550464
<i>O. gongnaisiensis</i>	HMAS 83574	China	ON551357	ON552244	ON550452	ON550465
<i>O. hanseniae</i>	WZ 2202	China	KU987012	KU987024	KU987033	—
<i>O. hanseniae</i>	XF007	China	KU987016	KU987028	KU987035	KU987038
<i>O. hanzhongensis</i>	610723MF0034	China	KY950470	ON552257	ON550453	ON550466
<i>O. kaushalii</i>	T. Læssøe 6236	Malaysia	KM010119	AF335111	KM823326	KM823455
<i>O. khakicolorata</i>	BJTC FM107	China	OM743967	OM743950	OM792158	OM792181
<i>O. korfii</i>	Z.W. Ge 1913	China	KU987017	KU987029	KU987036	—
<i>O. kunmingensis</i>	HKAS 49452	China	MK850489	—	—	—
<i>O. lactea</i>	HMAS 61359	China	OM721661	DQ443447	—	—
<i>O. leporina</i>	NV 2008.09.28	France	KM010092	KM823214	KM823284	KM823411
<i>O. leporina</i>	OSC 56784	USA	—	KM823215	KM823285	KM823412
<i>O. leporina</i>	H6003548	Finland	KF717578	KM823222	KM823292	KM823421
<i>O. leporina</i>	KH.09.93	Sweden	KM010090	KM823213	KM823283	KM823410
<i>O. minor</i>	KH.98.84	Denmark	KM010041	KM823217	KM823287	KM823414
<i>O. minor</i>	H6008618	Finland	KM010039	KM823219	KM823289	KM823416
<i>O. minor</i>	KH.10.311	Sweden	KM010042	KM823218	KM823288	KM823415
<i>O. mirabilis</i>	KH.01.09	Denmark	JN942769	AY500540	KM823290	KM823419
<i>O. mirabilis</i>	NV 2008.09.14	France	JN942768	JN941094	KM823291	KM823420
<i>O. mirabilis</i>	KH.10.285	Sweden	KM010094	KM823221	—	KM823418
<i>O. nannfeldtii</i>	JS.08.103	Sweden	KM010045	KM823224	KM823294	KM823423
<i>O. nannfeldtii</i>	H6002902	Finland	KF717581	KM823228	KM823297	KM823426
<i>O. nannfeldtii</i>	NV 2008.10.01	France	KM010099	KM823227	KM823296	KM823425
<i>O. nannfeldtii</i>	rh101310	USA	KM010100	KM823226	KM823295	KM823424
<i>O. onotica</i>	OSC 56759	USA	AF072068	JN941088	KM823300	KM823430
<i>O. onotica</i>	C-F-89691	Denmark	JN942773	JN941090	—	KM823427
<i>O. onotica</i>	KH.10.284	Sweden	KP006505	KM823229	KM823299	KM823429
<i>O. onotica</i>	KH.09.132	Norway	KM010103	KC012692	KC109263	JX943828
<i>O. oregonensis</i>	OSC 56745	USA	AF072089	KM823232	KM823303	KM823433
<i>O. oregonensis</i>	Moorefun 58	USA	KM010048	KM823231	KM823302	KM823432
<i>O. oregonensis</i>	Moorefun 31	USA	KM010047	KM823230	KM823301	KM823431
<i>O. papillata</i>	TUR 102134	Finland	KM010105	KM823233	KM823304	KM823434

<i>O. papillata</i>	H6003547	Finland	KF717582	KM823234	KM823305	KM823435
<i>O. parvispora</i>	JS.08.81	Sweden	KM010062	KM823187	KM823255	KM823383
<i>O. parvispora</i>	MCVE 30108	Spain	MK850491	MK850504	—	—
<i>O. parvispora</i>	MCVE 30107	Greece	MK850490	MK850503	—	—
<i>O. parvula</i>	BJTC FM210-A	China	OM743965	OM743966	OM792159	OM792182
<i>O. parvula</i>	BJTC FM210-B	China	OM743962	OM743956	OM792160	OM792183
<i>O. phlebophora</i>	JV06-385	Denmark	KM010049	KM823236	KM823306	KM823436
<i>O. phlebophora</i>	S-F108338	Sweden	KM010050	KM823490	—	—
<i>O. platyspora</i>	KH.09.163	Sweden	KM010106	KM823238	KM823308	KM823438
<i>O. platyspora</i>	JV06-656	Denmark	KM010108	KM823237	KM823307	KM823437
<i>O. plicara</i>	BJTC FM262-A	China	OM743957	OM743971	OM792161	OM792187
<i>O. plicara</i>	BJTC FM262-B	China	OM743961	OM743952	OM792162	OM792186
<i>O. propinquata</i>	NV 2008.09.15	France	KM010111	KM823240	KM823310	KM823440
<i>O. propinquata</i>	KH.09.99	Sweden	KM010109	KM823239	KM823309	KM823439
<i>O. pseudoformicarum</i>	HKAS 101386	China	KY498601	KY498606	—	MG980709
<i>O. pseudoleporina</i>	Moorefun14	USA	KM010113	KM823242	KM823312	KM823442
<i>O. pseudoleporina</i>	rh101910	USA	KM010112	KM823243	KM823313	KM823443
<i>O. purpureobrunnea</i>	BJTC FM1061	China	OM743969	OM743972	OM792163	OM792185
<i>O. purpureobrunnea</i>	BJTC FM1048	China	OM743974	OM743953	OM792164	OM792184
<i>O. purpureogrisea</i>	Z.W. Ge 863 (HKAS	China	KU987011	KU987023	KU987032	KU987037
<i>O. purpureogrisea</i>	WZ 2157 (HMAS72805)	China	KU987015	KU987027	KU987034	OM792170
<i>O. purpureogrisea</i> as <i>O. olivaceobrunnea</i>	HMAS 23948	China	KU987010	KU987022	—	—
<i>O. rainierensis</i>	A.H. Smith 30553 (MICH)	USA	KF717583	KM823245	KM823315	KM823445
<i>O. saliceticola</i>	MCVE 29365	Italy	MG383806	MG383814	—	—
<i>O. shennongjina</i>	HMAS 53691	China	ON551356	ON552249	ON550454	ON550467
<i>O. shennongjina</i>	HMAS 53692	China	ON551386	ON552248	ON550455	ON550468
<i>O. sinensis</i>	HMAS 61360	China	OM722037	DQ443451	—	—
<i>O. sinensis</i>	HMAS 268390	China	ON520792	ON521126	ON550456	ON550469
<i>O. sinensis</i>	HMAS 268544	China	ON520802	ON521143	ON550457	ON550470
<i>O. smithii</i>	OSC 56799	USA	AF072063	JN941087	KM823317	KM823447
<i>O. smithii</i>	ecv3345	USA	JN942771	JN941093	KM823316	KM823446
<i>O. stipitata</i>	HKAS 87865	China	KY498603	KY498608	—	—
<i>O. subformicarum</i>	CMP 1179	Spain	KM010053	KM823246	KM823318	KM823448
<i>O. subformicarum</i>	CL050928-30	Italy	KM010052	KM823247	KM823319	KM823449
<i>O. subformicarum</i>	S-F242696	Spain	KM010054	KM823495	—	—
<i>O. aff. subformicarum</i>	FH301035	Mexico	KM010055	KM823249	KM823321	KM823451
<i>O. aff. subformicarum</i>	FH301036	Mexico	KM010056	KM823248	KM823320	KM823450
<i>O. subpurpurea</i>	HKAS 54449	China	KU987018	KU987030	OM792150	OM792171
<i>O. subpurpurea</i>	HMAS 97530	China	KU987019	KU987031	—	—
<i>O. subpurpurea</i> as <i>O. bicolor</i>	HKAS 54453	China	OM714812	OM722133	OM792152	OM792173
<i>O. subpurpurea</i> as <i>O. pruinosa</i>	HKAS 81819	China	KY498602	KY498607	OM792149	OM792169
<i>O. subterranea</i>	RH69	USA	FJ404767	FJ404767	—	—
<i>O. subterranea</i>	RH97	USA	FJ404766	FJ404766	—	—
<i>O. tuomikoskii</i>	NV 2008.09.08	France	JN942777	JN941091	KM823323	KM823453
<i>O. tuomikoskii</i>	KH.09.130	Norway	JN942776	JN941092	KM823322	KM823452
<i>O. tuomikoskii</i>	OSC 56761	USA	AF072085	KM823251	KM823325	KM823454

<i>O. tuomikoskii</i>	H6002901	Finland	KF717585	KM823250	KM823324	—
<i>O. unicisa</i>	ZW Geo65-Clark	USA	KM010118	AY789369	—	—
<i>O. unicisa</i>	KH.06.06	USA	—	KC012693	KC109264	JX943829
<i>O. yunnanensis</i>	HMAS 82166	China	—	DQ443452	—	—
<i>O. sp.</i>	GMFN 2293	Italy	KM010037	KM823476	—	—
<i>O. sp.</i>	MK1081	Sweden	KM010058	KM823501	—	—
<i>O. sp.</i>	MK0942	Sweden	KM010057	KM823500	—	—
<i>O. sp.</i>	KH.09.79	Sweden	KM010120	KM823252	KM823327	KM823456
<i>O. sp. 'c'</i>	HMAS 85660	China	ON520805	ON521145	ON550458	ON567203
<i>O. sp</i>	HMAS 88262	China	ON520806	ON521147	ON550459	ON550471
<i>Warcupia terrestris</i>	CBS 891.69	Canada	MH859473	MH871254	KC109308	JX943832