

Supplementary materials

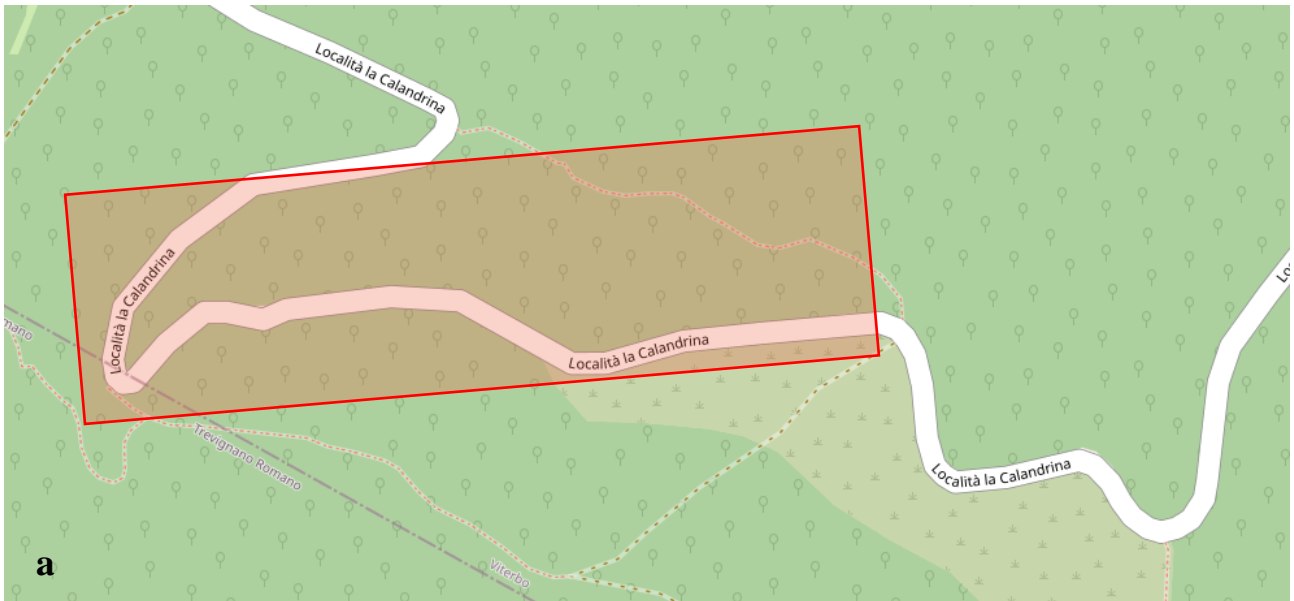
Rare findings from the chestnut forest of Monte Rocca Romana (Latium, Italy)

Arnold Knijn¹, Amalia Ferretti¹, Irja Saar²

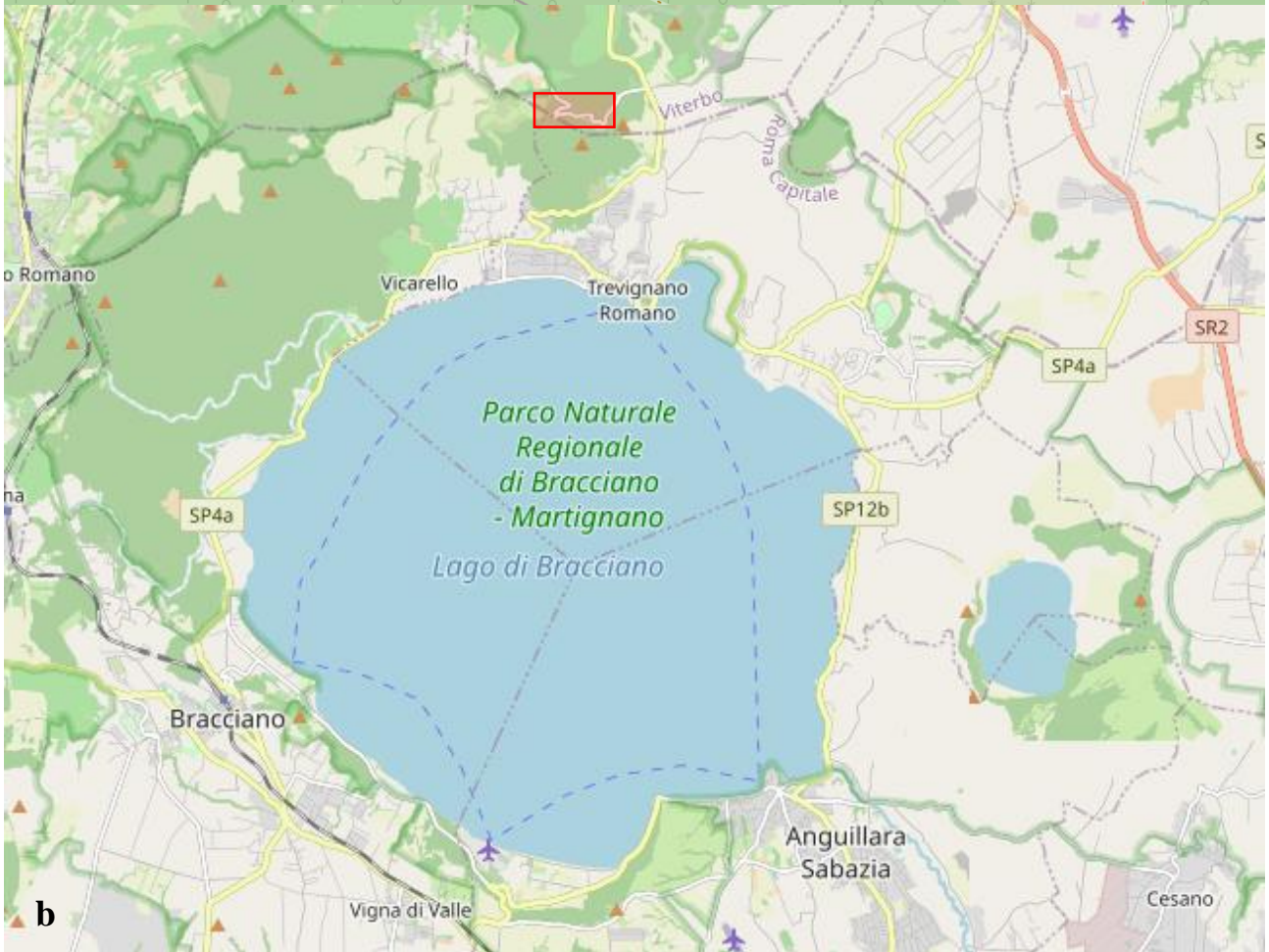
¹ Via Arno 36, 00198 Roma, Italy

² Institute of Ecology and Earth Sciences, University of Tartu, Ravila 14A, 50411 Tartu, Estonia

Corresponding author e-mail: knijn_roma@hotmail.com



a



b

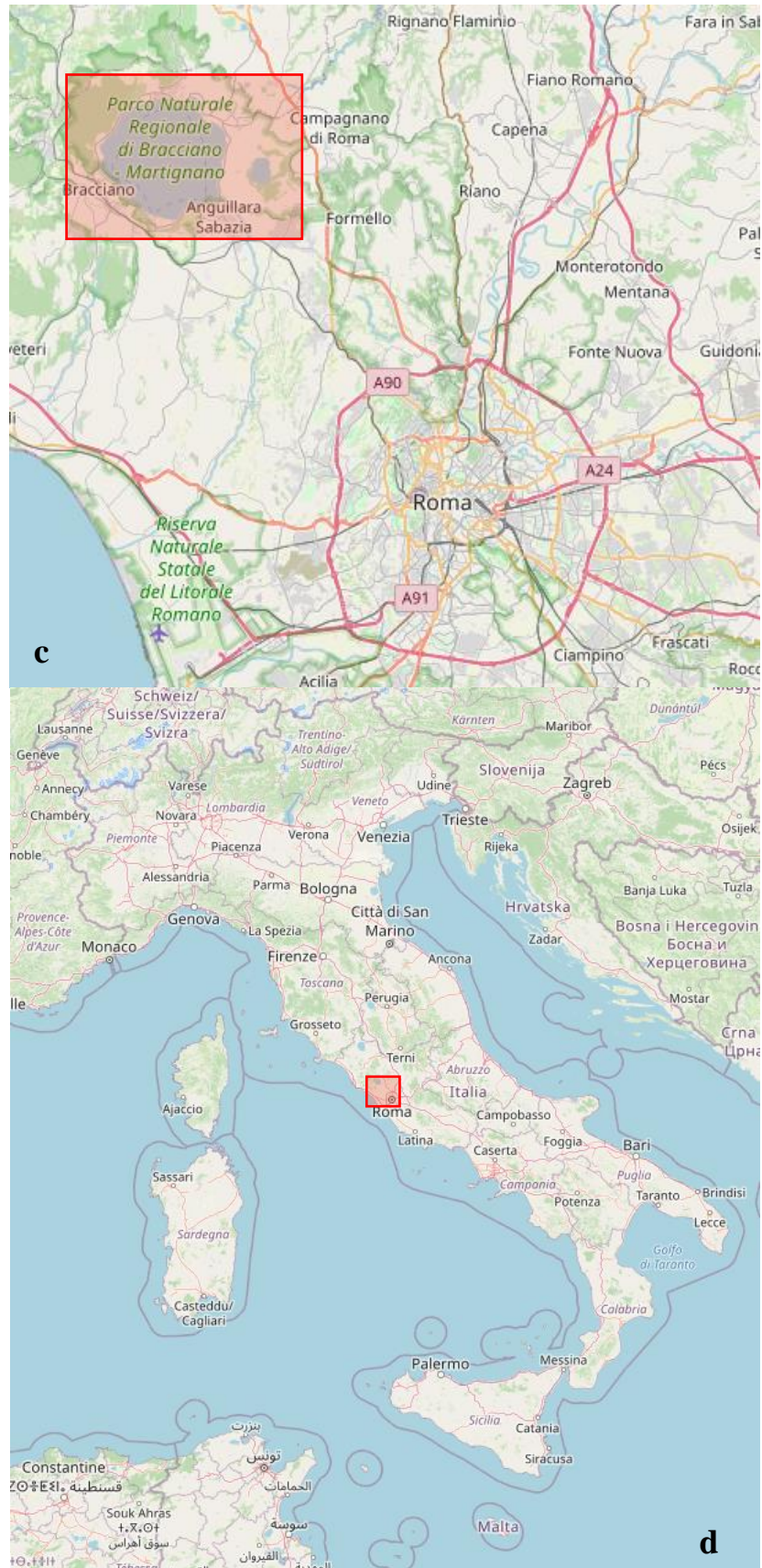


Fig. 1 – Maps of the area of study at different scales. The more detailed map (a) can be found at <https://www.openstreetmap.org/#map=17/42.18006/12.23658>. (a) The red box indicates the actual location of study, the sides of the box measure about 125×535 m; (b) the red box indicates (a); (c) the red box indicates (b); (d) the red box indicates (c). © [OpenStreetMap](#) contributors

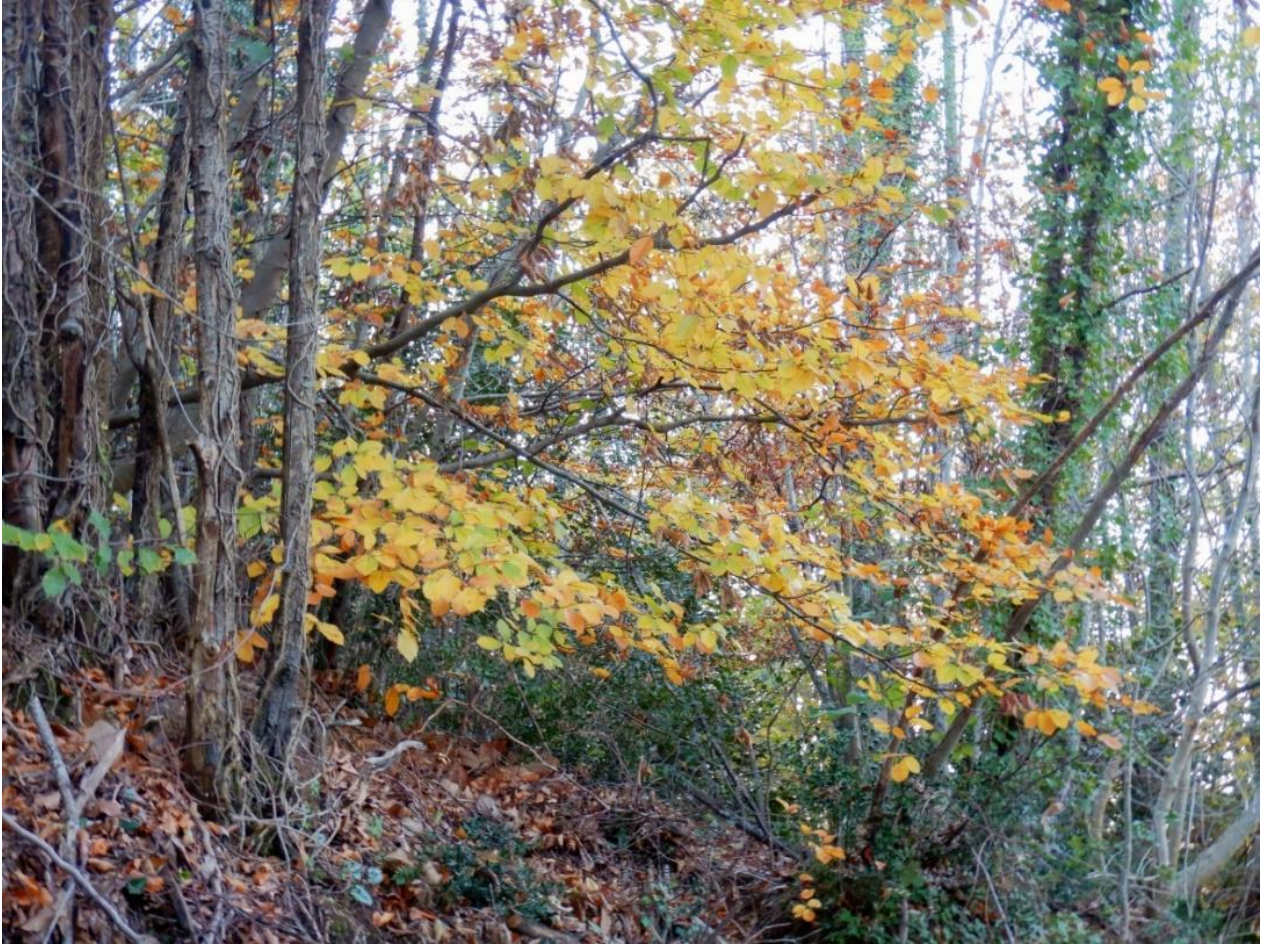


Fig. 2 – Habitat in the area of the chestnut forest on Monte Rocca Romana during the season of collection. Escarpment at the edge of the road where some of the fungal specimens were found.

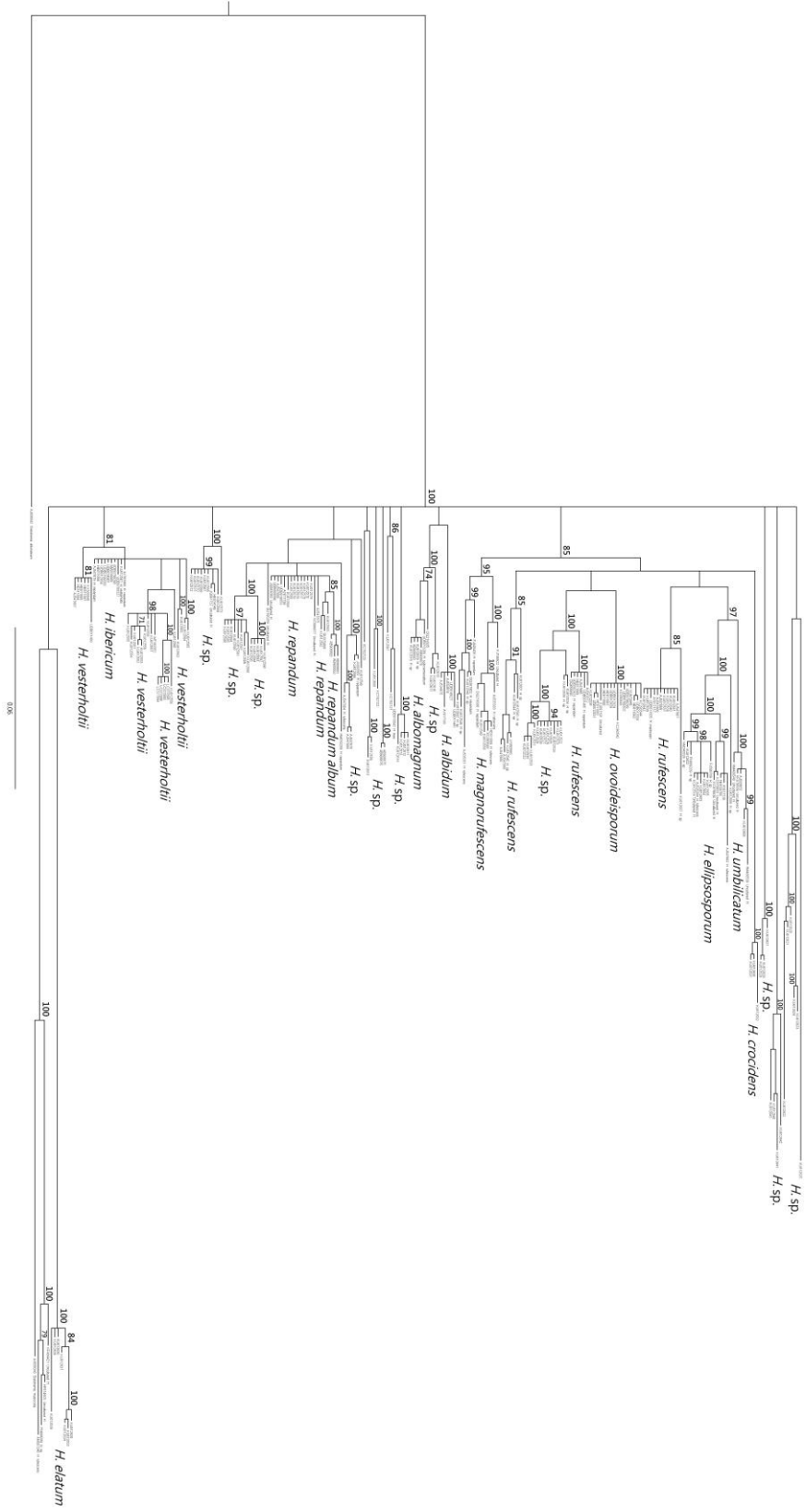


Fig. 3 – Phylogenetic tree upon alignment of the nuclear ribosomal ITS sequences of *Hydnum* species, identified by their UNITE/GenBank accession number and associated species. The sequences AJ606040 from *Sistotrema muscicola* and AJ606042 from *Sistotrema alboluteum* were used as outgroup. The dominant species of the clades are indicated, while sequences with discording assignments were left near the individual accession numbers. Bayesian posterior probabilities >70% are reported on the main branches.

Table 1 - The ITS sequence data used in the phylogenetic analyses of *Hydnum* species. The first column on the left indicates if the sequence is used in the more extensive analysis (1) and/or in the more restrictive analysis (2). Furthermore, their accession number, database and declared species are listed. The new sequences are highlighted in bold.

Analysis	Accession	Database	Species
1	AB906675	GenBank	<i>Hydnum</i> sp.
1	AB906676	GenBank	<i>Hydnum</i> sp.
1	AB906679	GenBank	<i>Hydnum albomagnum</i>
1	AB906680	GenBank	<i>Hydnum albomagnum</i>
1	AB906681	GenBank	<i>Hydnum repandum album</i>
1	AB906682	GenBank	<i>Hydnum repandum album</i>
1	AB906683	GenBank	<i>Hydnum repandum album</i>
1	AJ534972	GenBank	<i>Hydnum umbilicatum</i>
1	AJ534974	GenBank	<i>Hydnum albidum</i>
1	AJ534975	GenBank	<i>Hydnum albidum</i>
1	AJ535301	GenBank	<i>Hydnum rufescens</i>
1	AJ535303	GenBank	<i>Hydnum rufescens</i>
1	AJ535304	GenBank	<i>Hydnum rufescens</i>
1	AJ547866	GenBank	<i>Hydnum rufescens</i>
1	AJ547867	GenBank	<i>Hydnum rufescens</i>
1	AJ547868	GenBank	<i>Hydnum rufescens</i>
1	AJ547869	GenBank	<i>Hydnum</i> sp.
1	AJ547870	GenBank	<i>Hydnum</i> sp.
1	AJ547872	GenBank	<i>Hydnum rufescens</i>
1	AJ547875	GenBank	<i>Hydnum repandum</i>
1,2	AJ547879	GenBank	<i>Hydnum repandum</i>
1	AJ547880	GenBank	<i>Hydnum rufescens</i>
1	AJ547882	GenBank	<i>Hydnum rufescens</i>
1	AJ547884	GenBank	<i>Hydnum rufescens</i>
1	AJ547885	GenBank	<i>Hydnum rufescens</i>
1,2	AJ547887	GenBank	<i>Hydnum vesterholtii</i>
1	AJ547888	GenBank	<i>Hydnum repandum</i>
1	AJ547889	GenBank	<i>Hydnum rufescens</i>
1	AJ606040	GenBank	<i>Sistotrema muscicola</i>
1	AJ606042	GenBank	<i>Sistotrema alboluteum</i>
1,2	AJ783968	GenBank	<i>Hydnum repandum</i>
1	AM087246	GenBank	<i>Hydnum rufescens</i>
1	AY817135	GenBank	<i>Hydnum albidum</i>
1	AY817136	GenBank	<i>Hydnum repandum</i>
1	AY817137	GenBank	<i>Hydnum rufescens</i>
1	AY817138	GenBank	<i>Hydnum ellipsosporum</i>
1	DQ218305	GenBank	<i>Hydnum albomagnum</i>
1	DQ218306	GenBank	<i>Hydnum repandum</i>
1	DQ367902	GenBank	<i>Hydnum repandum</i>
1	DQ658890	GenBank	<i>Hydnum rufescens</i>
1	FJ196922	GenBank	Uncultured <i>Hydnum</i>
1	FJ596769	GenBank	<i>Hydnum</i> sp.
1	FJ845406	GenBank	<i>Hydnum repandum</i>
1	FJ897191	GenBank	Uncultured
1	FN669208	GenBank	<i>Hydnum</i> sp.
1	FN669209	GenBank	<i>Hydnum</i> sp.
1	GU180269	GenBank	Uncultured <i>Hydnum</i>
1	GU373488	GenBank	<i>Hydnum repandum</i>
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1,2	HE611081	GenBank	<i>Hydnum ovoideisporum</i>
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1	HE611088	GenBank	<i>Hydnum rufescens</i>
1	HE611089	GenBank	<i>Hydnum rufescens</i>
1	HE814148	GenBank	<i>Hydnum</i> sp.
1	HF674603	GenBank	Uncultured <i>Hydnum</i>
1	HM189768	GenBank	<i>Hydnum ellipsoisporum</i>
1	HM240528	GenBank	<i>Hydnum</i> sp.
1	HM488539	GenBank	Uncultured <i>Hydnum</i>
1	HM488540	GenBank	Uncultured <i>Hydnum</i>
1	HM639268	GenBank	<i>Hydnum repandum</i>
1	JQ063050	GenBank	Uncultured <i>Hydnum</i>
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1	JX093560	GenBank	<i>Hydnum rufescens</i>
1	JX093561	GenBank	<i>Hydnum repandum</i>
1	KC152121	GenBank	<i>Hydnum</i> sp.
1	KC152122	GenBank	<i>Hydnum</i> sp.
1	KC152123	GenBank	<i>Hydnum</i> sp.
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1,2	KC293543	GenBank	<i>Hydnum ovoideisporum</i>
1,2	KC293544	GenBank	<i>Hydnum ovoideisporum</i>
1	KC293545	GenBank	<i>Hydnum magnorufescens</i>
1	KC412514	GenBank	Uncultured <i>Hydnum</i>
1	KC679833	GenBank	Uncultured <i>Hydnum</i>
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1	KC686877	GenBank	Uncultured <i>Hydnum</i>
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1	KU612602	GenBank	<i>Hydnum ellipsosporum</i>
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1	KU612606	GenBank	<i>Hydnum</i> sp.
1	KU612607	GenBank	<i>Hydnum</i> sp.
1	KU612608	GenBank	<i>Hydnum umbilicatum</i>
1	KU612609	GenBank	<i>Hydnum</i> sp.
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1,2	MT163352	GenBank	<i>Hydnum vesterholtii</i>

1,2	MW376665	GenBank	<i>Hydnum ibericum</i>
1	UDB000096	UNITE	<i>Hydnum repandum</i>
1	UDB001465	UNITE	<i>Hydnum repandum</i>
1	UDB002423	UNITE	<i>Hydnum repandum</i>
1	UDB011441	UNITE	<i>Hydnum albidum</i>
1,2	UDB011493	UNITE	<i>Hydnum vesterholtii</i>
1	UDB011505	UNITE	<i>Hydnum melitosarx</i>
1,2	UDB012028	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB012029	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB012030	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB012031	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB012034	UNITE	<i>Hydnum ibericum</i>
1	UDB013043	UNITE	<i>Hydnum treui</i>
1	UDB013289	UNITE	<i>Hydnum subcremeoalbum</i>
1,2	UDB014961	UNITE	<i>Hydnum ibericum</i>
1	UDB016627	UNITE	<i>Hydnum albidum</i>
1	UDB018053	UNITE	<i>Hydnum repandum</i>
1,2	UDB0780327	UNITE	<i>Hydnum ibericum</i>
1,2	UDB0799298	UNITE	<i>Hydnum ibericum</i>
1,2	UDB0799299	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB0799302	UNITE	<i>Hydnum ovoideisporum</i>
1,2	UDB0799303	UNITE	<i>Hydnum ibericum</i>

Table 2 - The ITS sequence data used in the phylogenetic analysis of *Entoloma* species. The sequence's accession number, database and declared species are listed. The new sequence is highlighted in bold.

Accession	Database	Species
AF335439	GenBank	<i>Entoloma cf sericeum</i>
JF907995	GenBank	<i>Entoloma chalybaeum</i>
JF908005	GenBank	<i>Entocybe turbida</i>
JQ281477	GenBank	<i>Entoloma caespitosum</i>
JQ281480	GenBank	<i>Entoloma stylophorum</i>
JQ281482	GenBank	<i>Entoloma praegracile</i>
JQ281488	GenBank	<i>Entoloma incanum</i>
JQ281491	GenBank	<i>Entoloma caespitosum</i>
JQ291564	GenBank	<i>Entoloma mastoideum</i>
JQ320107	GenBank	<i>Entoloma praegracile</i>
JQ320109	GenBank	<i>Entoloma subtenuicystidium</i>
JQ320114	GenBank	<i>Entoloma subtenuicystidium</i>
JQ410334	GenBank	<i>Entoloma azureosquamulosum</i>
KC257434	GenBank	<i>Entoloma coelestinum</i>
KC581341	GenBank	<i>Leptonia serrulata</i>
KC898362	GenBank	<i>Entoloma coelestinum</i>
KC898364	GenBank	<i>Entoloma lepidissimum</i>
KC898366	GenBank	<i>Entoloma lepidissimum</i>
KC898367	GenBank	<i>Entoloma lepidissimum</i>
KC898425	GenBank	<i>Entoloma chytrophilum</i>
KC898443	GenBank	<i>Entoloma insidiosum</i>
KC898444	GenBank	<i>Entoloma griseocyaneum</i>
KC898445	GenBank	<i>Entoloma chalybaeum</i>
KC898446	GenBank	<i>Entoloma mougeotii</i>
KC898448	GenBank	<i>Entoloma violaceozonatum</i>
KC898449	GenBank	<i>Entoloma inocephalum</i>
KC898451	GenBank	<i>Entoloma indutoides</i>
KC898452	GenBank	<i>Entoloma quadratum</i>
KC898453	GenBank	<i>Entoloma sericellum</i>
KP965765	GenBank	<i>Alboleptonia sericella</i>
KP965773	GenBank	<i>Entoloma exile</i>
KP965774	GenBank	<i>Entoloma pseudocoelestinum</i>
KU058498	GenBank	<i>Entocybe nitida</i>
KU574743	GenBank	<i>Entoloma serrulatum</i>
KU574744	GenBank	<i>Leptonia rectangula</i>
KY711234	GenBank	<i>Entoloma subcaesiocinctum</i>
KY711238	GenBank	<i>Entoloma cyanostipitum</i>
KY744171	GenBank	<i>Entoloma olivaceomarginatum</i>
KY744172	GenBank	<i>Entoloma velutinum</i>
KY777376	GenBank	<i>Entoloma velutinum</i>
KY972699	GenBank	<i>Entoloma subcaesiocinctum</i>
KY972700	GenBank	<i>Entoloma cyanostipitum</i>
LN850552	GenBank	<i>Entoloma mougeotii</i>
MF898426	GenBank	<i>Entoloma nigrovelutinum</i>
MF977951	GenBank	<i>Entoloma exile</i>
MF977955	GenBank	<i>Entoloma incanum</i>
MF977966	GenBank	<i>Entoloma pseudocoelestinum</i>
MG947210	GenBank	<i>Entoloma yanacolor</i>
MG953995	GenBank	<i>Entoloma serrulatum</i>
MK250941	GenBank	<i>Entoloma praegracile</i>

MN088709	GenBank	<i>Entoloma chytrophilum</i>
MN523242	GenBank	<i>Entoloma stylophorum</i>
MN992132	GenBank	<i>Entoloma</i> sp.
MT741746	GenBank	<i>Entoloma mougeotii</i>
MW340896	GenBank	<i>Entoloma montanum</i>
MW340899	GenBank	<i>Entoloma nordlandicum</i>
MW340904	GenBank	<i>Entoloma septentrionale</i>
NR 137086	GenBank	<i>Entoloma azureosquamulosum</i>
NR 137592	GenBank	<i>Entoloma mastoideum</i>
NR 154977	GenBank	<i>Entoloma cyanostipitum</i>
NR 155101	GenBank	<i>Entoloma subcaesiocinctum</i>
NR 158429	GenBank	<i>Entoloma nigrovelutinum</i>
UDB015509	UNITE	<i>Entoloma sericellum</i>
UDB015645	UNITE	<i>Entoloma mougeotii</i>
UDB015647	UNITE	<i>Entoloma nitidum</i>
UDB016265	UNITE	<i>Entoloma mougeotii</i>
UDB024130	UNITE	<i>Entoloma sericellum</i>
UDB024642	UNITE	<i>Entoloma chalybaeum</i> var <i>lazulinum</i>
UDB034191	UNITE	<i>Entoloma chalybaeum</i>
UDB034209	UNITE	<i>Entoloma exile</i>
UDB034957	UNITE	<i>Entoloma politoiflavipes</i>
UDB0799300	UNITE	<i>Entoloma</i> sp.