

## Supplementary Materials:

Table S1 Taxonomic References and Typification

Species	Current Citation	Basionym	Basionym Citation	Protologue Citation	Typification
<i>Suillus bovinus</i>	<i>Suillus bovinus</i> (L.) Roussel, <i>Fl. Calvados</i> : 34 (1796)	<i>Boletus bovinus</i>	<i>Boletus bovinus</i> L., <i>Sp. pl.</i> 2: 1177 (1753)	Linne C, Salvius L. Species plantarum: exhibentes plantas... Vol. II. Holmiae, Impensis Laurentii Salvii, 1753.	undesigned according to Index Fungorum
<i>Suillus bresadolae</i>	<i>Suillus bresadolae</i> (Quél.) Gerhold, <i>Z. Mykol.</i> 51(1): 161 (1985)	<i>Boletus bresadolae</i>	<i>Boletus bresadolae</i> Quél., <i>Fung. trident.</i> 1(1): 13 (1881)	Bresadola G. Fungi Tridentini novi, vel nondum delineati, descripti et iconibus illustrati, Vol. I. Monuani, 1881.	Tab. XIV (loc. cit.)
<i>Suillus cavipes</i>	<i>Suillus cavipes</i> (Klotzsch) A.H. Sm. & Thiers, <i>Monogr. North Amer. Species Suillus</i> : 30 (1964)	<i>Boletus cavipes</i>	<i>Boletus cavipes</i> Klotzsch, in Fries & Hök, <i>Boleti, Fungorum generis, illustratio</i> : 7 (1835)	Teodor FK. Boleti, fungorum generis, illustratio, etc. Proes. Elias Fries. Upsaliae, 1835.	Klotzsch, Sept. 1834; Neotype WU 11150 (Designated by Klofac & Greilhuber, Öst. Z. Pilzk. 3: 3. 1994).
<i>Suillus collinitus</i>	<i>Suillus collinitus</i> (Fr.) Kuntze, <i>Revis. gen. pl.</i> (Leipzig) 3(3): 536 (1898)	<i>Boletus collinitus</i>	<i>Boletus collinitus</i> Fr., <i>Epicr. syst. mycol.</i> (Upsaliae): 410 (1838)	Fries E.M. Epicrisis Systematis Mycologici, seu Synopsis Hymenomycetum. i-xii, 1-612, 1836-1838.	Tab. 126 (Schaeffer)
<i>Suillus flavidus</i>	<i>Suillus flavidus</i> (Fr.) J. Presl, <i>Wšobecný rostl.</i> (Praha) 2: 1917 (1846)	<i>Boletus flavidus</i>	<i>Boletus flavidus</i> Fr., <i>Observ. mycol.</i> (Havniae) 1: 110 (1815)	Fries E. Observationes mycologicae. Havniae, sumptibus G. Bonnierii, 1815.	undesigned according to Index Fungorum
<i>Suillus granulatus</i>	<i>Suillus granulatus</i> (L.) Roussel, <i>Fl. Calvados</i> : 34 (1796)	<i>Boletus granulatus</i>	<i>Boletus granulatus</i> L., <i>Sp. pl.</i> 2: 1177 (1753)	Linne C, Salvius L. Species plantarum: exhibentes plantas... Vol. II. Holmiae, Impensis Laurentii Salvii, 1753.	undesigned according to Index Fungorum

<i>Suillus grevillei</i>	<i>Suillus grevillei</i> (Klotzsch) Singer, <i>Farlowia</i> 2(2): 259 (1945)	<i>Boletus grevillei</i>	<i>Boletus grevillei</i> Klotzsch, <i>Linnaea</i> 7: 198 (1832)	Garcke A, Schlechtendal, D. F. L. <i>Linnaea</i> : Ein Journal für die Botanik in ihrem ganzen Umfange. Berlin F. Dümmler, 1832.	Tab. 183 (Greville, Scott. Crypt. Flor. 4, 1826); Lectotype (Singer, 1955, implicit): Leg. and det. J. F. Klotzsch. In Herb. Kew (Hooker herbarium)
<i>Suillus luteus</i>	<i>Suillus luteus</i> (L.) Roussel, <i>Fl. Calvados</i> : 34 (1796)	<i>Boletus luteus</i>	<i>Boletus luteus</i> L., <i>Sp. pl.</i> 2: 1177 (1753)	Linne C, Salvius L. <i>Species plantarum: exhibentes plantas... Vol. II. Holmiae, Impensis Laurentii Salvii</i> , 1753.	Buxbaum, tab. 14
<i>Suillus mediterraneensis</i>	<i>Suillus mediterraneensis</i> (Jacquet. & J. Blum) Redeuilh, <i>Docums Mycol.</i> 22(no. 86): 40 (1992)	<i>Boletus granulatus</i> var. <i>mediterraneensis</i>	<i>Boletus granulatus</i> var. <i>mediterraneensis</i> Jacquet. & J. Blum, <i>Bull. trimest. Soc. mycol. Fr.</i> 81: 484 (1965)	Blum J. <i>Essai de determination des bolets du groupe Granulatus</i> . Paris. 1965	undesigned according to Index Fungorum; possibly Plate 31. Fig. 5. Barla (1859)
<i>Suillus placidus</i>	<i>Suillus placidus</i> (Bonord.) Singer, <i>Farlowia</i> 2(1): 42 (1945)	<i>Boletus placidus</i>	<i>Boletus placidus</i> Bonord., <i>Bot. Ztg.</i> 19: 204 (1861)	von Mohl H, von Schlechtendal DFL. <i>Botanische Zeitung</i> . Berlin, A. Förstner, 1861	undesigned according to Index Fungorum; Palm & Stewart (1989)
<i>Suillus subluteus</i>	<i>Suillus subluteus</i> (Peck) Snell, in Slipp & Snell, <i>Lloydia</i> 7(1): 34 (1944)	<i>Boletus subluteus</i>	<i>Boletus subluteus</i> Peck, <i>Ann. Rep. Reg. N.Y. St. Mus.</i> 48: 294 (1897) [1895]	Peck. Annual report of the Regents By New York State Museum. Albany, J.B. Lyon, State Printer, 1894.	Pl. 35, figs 1-6 (loc. cit); Lectotype (nobis): New York. Lewis Co., Felt House, Croghan. Sept. 1872. C. H. Peck. s.n. (NYS)
<i>Suillus tridentinus</i>	<i>Suillus tridentinus</i> (Bres.) Singer, <i>Farlowia</i> 2(2): 260 (1945)	<i>Boletus tridentinus</i>	<i>Boletus tridentinus</i> Bres., <i>Fung. trident.</i> 1(1): 13 (1881)	Bresadola G. <i>Fungi Tridentini novi, vel nondum delineati, descripti, et ...</i> , Vol. I. Monuani, 1881.	Tab. XIII (loc. cit.)

<i>Suillus variegatus</i>	<i>Suillus variegatus</i> (Sw.) Richon & Roze, <i>Atlas</i> <i>Champ.</i> (Aubervilliers): 178 (1888)	<i>Boletus</i> <i>variegatus</i>	<i>Boletus</i> <i>variegatus</i> Sw., <i>K. Vetensk-Acad.</i> <i>Nya Handl.</i> 31: 8 (1810)	Swartz O. Kungl. Svenska vetenskaps akademiens handlingar, Vol 31. A.J. Segerstedt, 1810.	undesignated according to Index Fungorum
<i>Suillus viscidus</i>	<i>Suillus viscidus</i> (L.) Roussel, <i>Fl.</i> <i>Calvados</i> : 34 (1796)	<i>Boletus viscidus</i>	<i>Boletus viscidus</i> L., <i>Sp. pl.</i> 2: 1177 (1753)	Linne C, Salvius L. <i>Species</i> <i>plantarum</i> : <i>exhibentes</i> <i>plantas...</i> Vol. II. Holmiae, Impensis Laurentii Salvii, 1753.	anon. s.n. ( <i>Fl.</i> <i>suec.</i> , no. 1089)

Table S2 GenBank Sequences

Species	Sample Code	ITS	LSU	RPB1	RPB2	TEF1
<i>S. bovinus</i>	KM164971	KU721203	KU721292	KU852269	KU852336	KU721733
<i>S. cavipes</i>	TDB646	KU721548	KU721428	KU852276	KU852368	KU721572
<i>S. collinitus</i>	FR2014382	KT883894				
<i>S. flavidus</i>	F1187506	KU721494	KU721377		KU852353	KU721705
<i>S. granulatus</i>	KM172141	KU721242	KU721344		KU852295	KU721637
<i>S. grevillei</i>	F1186939	KU721467	KU663250	KU852225	KU852322	KU721657
<i>S. luteus</i>	KM171470	KU721218	KU721399		KU852311	
<i>S. tridentinus</i>	HB347	KU721289	KU663244	KU852208	KU852325	KU721661
<i>S. variegatus</i>	FFP1112	JQ711932				
<i>S. viscidus</i>	KM166812	KU721460	KU663230	KU852213	KU852331	KU721685
<i>Rhizopogon sinoalbidus</i>	HKAS84655	MH827596	MH827601		MH827608	MH827591

Table S3 *Fungarium Specimens*

Catalogue Number	Lab Code	Accepted Name	Collection Date	Country	Collected By
K-M000156920	MSB001	Suillus bovinus	10-10-2001	England	M.W. Storey
K-M000170720	MSB002	Suillus bovinus	23-10-2001	England	A.E. Hills 2001213
K-M000170029	MSB003	Suillus bovinus	01-09-2002	Scotland	M. de Ayala 2002147
K-M000104825	MSB004	Suillus bovinus	21-09-2002	England	R. Iliffe
K-M000170022	MSB005	Suillus bovinus	20-11-2002	Wales	P. Cullington 2002197
K-M000124576	MSB006	Suillus bovinus	11-10-2004	England	N.W. Legon
K-M000130989	MSB007	Suillus bovinus	20-05-2005	England	E.W. Brown
K-M000133460	MSB008	Suillus bovinus	09-10-2005	England	N.W. Legon
K-M000141237	MSB009	Suillus bovinus	12-09-2006	England	N.W. Legon
K-M000164971	MSB010	Suillus bovinus	22-11-2009	England	E.W. Brown
K-M000203894	MSB011	Suillus cavipes	12-09-2001	England	M. Rotheroe
K-M000169451	MSB012	Suillus cavipes	14-09-2001	England	A.E. Hills 2001148
K-M000091711	MSB013	Suillus cavipes	07-10-2001	Wales	T. Davis
K-M000170240	MSB014	Suillus cavipes	07-10-2001	Wales	T. Davis [ex herb. A.E. Hills 2001221]
K-M000170000	MSB015	Suillus cavipes	20-11-2002	Wales	A.E. Hills 2002201
K-M000174212	MSB016	Suillus cavipes	16-10-2003	Wales	A.E. Hills 2003077
K-M000192688	MSB017	Suillus cavipes	05-09-2013	Scotland	J. Pitt & J. Weightman
K-M000194552	MSB018	Suillus cavipes	27-08-2014	Scotland	A. Murfitt
K-M000203655	MSB019	Suillus cavipes	25-09-2015	England	D. Griffin
K-M000227416	MSB020	Suillus cavipes	15-10-2016	England	B. Johnson
K-M000168643	MSB021	Suillus collinitus	02-09-1993	England	A.E. Hills 1993006
K-M000027545	MSB022	Suillus collinitus	01-10-1994	England	N.W. Legon
K-M000040035	MSB023	Suillus collinitus	21-09-1996	England	N.W. Legon
K-M000094383	MSB024	Suillus collinitus	24-09-2001	Wales	E.E. Emmett
K-M000103139	MSB025	Suillus collinitus	29-09-2002	England	P. Leonard
K-M000118240	MSB026	Suillus collinitus	27-10-2003	England	S.E. Evans
K-M000126760	MSB027	Suillus collinitus	01-10-2004	England	comm. J. Darby
K-M000167659	MSB028	Suillus collinitus	15-10-2005	England	A.E. Hills 2005105
K-M000167445	MSB029	Suillus collinitus	19-10-2010	England	V. Hodge
K-M000227289	MSB030	Suillus collinitus	12-09-2015	England	N.W. Legon
K-M000168107	MSB031	Suillus flavidus	21-09-1998	Scotland	E. Collier [ex herb. A.E. Hills]
K-M000250339	MSB032	Suillus flavidus	23-08-2000	Scotland	V.E. Emmett
K-M000094407	MSB033	Suillus flavidus	13-10-2001	Scotland	E.E. Emmett
K-M000160948	MSB034	Suillus flavidus	17-09-2007	Scotland	D.J. Savage 939/07
K-M000170716	MSB035	Suillus flavidus	15-09-2008	Scotland	A.E. Hills 2008065
K-M000160947	MSB036	Suillus flavidus	20-09-2008	Scotland	D.J. Savage 202/08
K-M000171907	MSB037	Suillus flavidus	24-08-2011	Scotland	J. Weightman
K-M000190678	MSB038	Suillus flavidus	01-10-2011	Wales	M. McNamara
K-M000200296	MSB039	Suillus flavidus	24-08-2015		T. Niskanen
K-M000257301	MSB040	Suillus flavidus	01-10-2017	Wales	C.E. Aron, 4076
K-M000176951	MSB041	Suillus granulatus	28-05-2003	Wales	A.E. Hills 2003005

<b>K-M000177033</b>	MSB042	Suillus granulatus	10-07-2003	England	A.E. Hills 2003014
<b>K-M000175420</b>	MSB043	Suillus granulatus	13-09-2003	England	A.E. Hills 2003060
<b>K-M000174199</b>	MSB044	Suillus granulatus	17-09-2003	England	A.E. Hills 2003064
<b>K-M000123316</b>	MSB045	Suillus granulatus	12-05-2004	England	E.W. Brown
<b>K-M000169404</b>	MSB046	Suillus granulatus	18-05-2004	England	A.E. Hills 2004004
<b>K-M000168983</b>	MSB047	Suillus granulatus	11-07-2004	England	A.E. Hills 2004023
<b>K-M000139498</b>	MSB048	Suillus granulatus	01-06-2006	England	N.W. Legon
<b>K-M000170858</b>	MSB049	Suillus granulatus	27-05-2008	England	S. Kelly [ex herb. A.E. Hills 2008001]
<b>K-M000227281</b>	MSB050	Suillus granulatus	12-09-2015	England	N.W. Legon
<b>K-M000175410</b>	MSB051	Suillus grevillei	28-05-2003	Wales	A.E. Hills 20030302
<b>K-M000122831</b>	MSB052	Suillus grevillei	05-07-2004	England	N.W. Legon
<b>K-M000168973</b>	MSB053	Suillus grevillei	11-07-2004	England	A.E. Hills 2004021
<b>K-M000167687</b>	MSB054	Suillus grevillei	02-11-2005	England	A.E. Hills 2005112
<b>K-M000168787</b>	MSB055	Suillus grevillei	08-10-2006	England	A.E. Hills 2006084
<b>K-M000176954</b>	MSB056	Suillus grevillei	15-08-2009	England	N.W. Legon
<b>K-M000174621</b>	MSB057	Suillus grevillei	18-08-2009	England	N.W. Legon
<b>K-M000164854</b>	MSB058	Suillus grevillei	16-10-2009	England	E.W. Brown
<b>K-M000172554</b>	MSB059	Suillus grevillei	04-10-2011	England	E.W. Brown
<b>K-M000263879</b>	MSB060	Suillus grevillei	23-10-2019	Wales	S. Chowdhury
<b>K-M000174511</b>	MSB061	Suillus luteus	25-10-2000	England	S. Kelly [ex herb. A.E. Hills 2000138]
<b>K-M000171878</b>	MSB062	Suillus luteus	02-10-2001	England	A.E. Hills 20011059
<b>K-M000154954</b>	MSB063	Suillus luteus	10-10-2001	England	M.W. Storey
<b>K-M000170007</b>	MSB064	Suillus luteus	05-10-2002	England	A.E. Hills 2002193
<b>K-M000118032</b>	MSB065	Suillus luteus	15-10-2003	England	N.W. Legon
<b>K-M000168991</b>	MSB066	Suillus luteus	14-07-2004	England	A.E. Hills 2004027
<b>K-M000127131</b>	MSB067	Suillus luteus	10-09-2004	England	E.W. Brown
<b>K-M000124581</b>	MSB068	Suillus luteus	11-10-2004	England	N.W. Legon
<b>K-M000130024</b>	MSB069	Suillus luteus	29-04-2005	England	E.W. Brown
<b>K-M000171470</b>	MSB070	Suillus luteus	05-10-2005	England	A.E. Hills 2005088
<b>K-M000066917</b>	MSB071	Suillus tridentinus	13-10-1999	England	N.W. Legon
<b>K-M000250694</b>	MSB072	Suillus tridentinus	14-10-2000	England	T.C.E. Wells
<b>K-M000171939</b>	MSB073	Suillus tridentinus	11-10-2001	England	A.E. Hills 2001177
<b>K-M000174193</b>	MSB074	Suillus tridentinus	16-10-2003	Wales	A.E. Hills 2003078
<b>K-M000170299</b>	MSB075	Suillus tridentinus	28-10-2006	England	A.E. Hills 2006116
<b>K-M000170119</b>	MSB076	Suillus tridentinus	15-08-2009	England	N.W. Legon
<b>K-M000174620</b>	MSB077	Suillus tridentinus	07-09-2011	England	N.W. Legon
<b>K-M000192695</b>	MSB078	Suillus tridentinus	10-10-2013	England	J. Weightman
<b>K-M000195070</b>	MSB079	Suillus tridentinus	22-10-2014	Wales	M. Tortelli & G.G.Kibby
<b>K-M000232871</b>	MSB080	Suillus tridentinus	11-11-2016	Wales	M. Bright
<b>K-M000084228</b>	MSB081	Suillus variegatus	13-08-2000	Scotland	E.E. Emmett
<b>K-M000174525</b>	MSB082	Suillus variegatus	12-10-2000	England	A.E. Hills 2000119
<b>K-M000170024</b>	MSB083	Suillus variegatus	31-10-2002	England	A.E. Hills 2002177

<b>K-M000124392</b>	MSB084	Suillus variegatus	07-09-2004	England	N.W. Legon
<b>K-M000124582</b>	MSB085	Suillus variegatus	11-10-2004	England	N.W. Legon
<b>K-M000127129</b>	MSB086	Suillus variegatus	24-10-2004	England	E.W. Brown
<b>K-M000174084</b>	MSB087	Suillus variegatus	12-11-2005	England	M.A. Kelly [ex herb. A.E. Hills 2006126]
<b>K-M000142386</b>	MSB088	Suillus variegatus	13-10-2006	England	N.W. Legon
<b>K-M000169463</b>	MSB089	Suillus variegatus	01-11-2007	England	A.E. Hills 2007057
<b>K-M000164961</b>	MSB090	Suillus variegatus	22-11-2009	England	B.M. Spooner
<b>K-M000169002</b>	MSB091	Suillus viscidus	11-07-2004	England	A.E. Hills 2004022
<b>K-M000124630</b>	MSB092	Suillus viscidus	03-10-2004	England	N.W. Legon
<b>K-M000167797</b>	MSB093	Suillus viscidus	18-10-2005	England	A.E. Hills 2005106
<b>K-M000173750</b>	MSB094	Suillus viscidus	05-11-2005	England	A.E. Hills 2005163
<b>K-M000175190</b>	MSB095	Suillus viscidus	10-10-2009	England	N.W. Legon
<b>K-M000166812</b>	MSB096	Suillus viscidus	25-08-2010	England	E.W. Brown
<b>K-M000176934</b>	MSB097	Suillus viscidus	13-09-2010	England	N.W. Legon
<b>K-M000174627</b>	MSB098	Suillus viscidus	25-08-2011	England	N.W. Legon
<b>K-M000263489</b>	MSB099	Suillus viscidus	09-10-2019	England	V. Bradfield
<b>K-M001436681</b>	MSB100	Suillus viscidus	10-11-2022		
<b>K-M000204897</b>	MSB101	Suillus bresadolae	17-10-1995	England	P. Leonard
<b>K-M000204896</b>	MSB102	Suillus bresadolae	17-10-1995	England	P. Leonard
<b>K-M000227291</b>	MSB103	Suillus mediterraneensis	17-09-2015	England	N.W. Legon
<b>K-M000094217</b>	MSB104	Suillus placidus	10-10-1981	England	J. Pitt
<b>K-M000657473</b>	MSB105	Suillus subluteus		England	Groves

Table S4 Macro-Morphology of the Ten Most Common Species of *Suillus* in the UK\*

	<i>Suillus</i> Species	Cap Color	Cap Margin	Cap Texture	Stipe Color	Stipe Texture	Ring	Flesh Color
1	<i>bovinus</i>	pale, pink to muddy yellow	pale to white	viscid	typically matching cap	smooth but dotted at apex	absent	yellow- white, some variation in cap
2	<i>cavipes</i>	rusty brown	umber scale with pale tips	scaly to shaggy	yellow to brown, or matching cap	no distinct texture	present; distinct	yellow to red towards base
3	<i>collinitus</i>	red or cinnamon brown	inrolled but no veil	fibrillose, viscid when wet	yellow, may be pink at base	purple brown glandular dots	absent	white to yellow, occasional pink tints
4	<i>flavidus</i>	lemon yellow to ochre	no distinction	viscid	yellow	glands	present	yellow
5	<i>granulatus</i>	tan to rust, aging to pale yellow	no distinction	tacky, viscid (peels easily)	yellow at apex, pink towards base	white to brown dot- glands	absent	yellow
6	<i>grevillei</i>	yellow maturing to orange	no distinction	shiny when dry	yellow, darker below ring	granular or veiny	present	pale yellow, may be darker in stem
7	<i>luteus</i>	purple- brown	no distinction	glutinous to mucilaginous	yellow, darkening with age	glandular dots	present; large	white to yellow, pink at base
8	<i>tridentinus</i>	orange becoming rustier with age	orange to yellow	viscid, scaly near margin	white- yellow, sometimes pinkish at base	no distinct texture	present	yellow to pink/orange
9	<i>variegatus</i>	yellow- brown	scaly	scaly, greasy	ochre, sienna; yellow stronger at apex	no distinct texture	absent	yellow, occasional blue tint
10	<i>viscidus</i>	off white, maturing to yellow then green-hazel	no distinction	viscid, glutenous; satin when dry	off white with yellow or grey- green tone	no distinct texture	present	cream, blue-green marbling in stipe



	Oxidation or Bruising	Pore Color	Tube Color	Tube Attachment	Smell	Taste	Mycorrhizal Association	Spore Print
1	none	yellow to grey-green, muddier with age	dirty yellow to grey-green	subdecurrent to decurrent	indistinct	mild, sweetish	<i>Pinus</i>	olive- brown
2	none	yellow	lemon to sulfur yellow, maturing greenish	decurrent	mildly inky	indistinct	<i>Larix</i>	olive- yellow
3	none	yellow, maturing more red- brown hue	lemon yellow	adnate to subdecurrent	indistinct	indistinct	<i>Pinus nigra</i> , <i>P. sylvestris</i> , <i>P. radiata</i>	ochre
4	oxidizing pink	same as tubes	"dark straw" to yellow	decurrent	indistinct	indistinct	<i>Pinus</i>	amber, yellow- brown
5	none	yellow, pale exudate that darkens when hardened	pale yellow	adnate to subdecurrent	indistinct, "pleasant"	indistinct, "pleasant"	<i>Pinus sylvestris</i>	ochre to sienna
6	tubes and stipe bruise rusty	yellow	yellow, ochre	subdecurrent to decurrent	indistinct	mildly acidic	<i>Larix</i>	ochre to sienna
7	none	same as tubes	yellow, ochre to orange	adnate	indistinct	indistinct	<i>Pinus sylvestris</i>	clay to ochre
8	oxidizes orange	orange to rust	orange, maturing to rust	subdecurrent	indistinct	mildly acidic	<i>Larix</i>	"dark straw- color, flushed sienna"
9	pores bruise blue- green	yellow, maturing to rust	"buff" to ochre	subdecurrent to adnate	indistinct but strong	acidic	<i>Pinus sylvestris</i>	brown
10	pores bruise greenish	consistent with tube color	greyish white	adnate to subdecurrent	very mild	mildly acidic	<i>Larix</i> ; calcerous and sandy soils	brown to reddish- brown

\*based on descriptions from Kibby, 2017; Muñoz, 2005; Smith & Thiers, 1964; Watling & Hill 2005