

Supplementary Table 1

Supplementary Table 1. Details of isolates from *Phytophthora* and *Nothophytophthora* considered in the phylogenetic, morphological, growth-temperature and pathogenicity studies. GenBank numbers for sequences obtained in the present study are printed in italics. GenBank numbers for sequences used in the multigene phylogenetic analyses are printed in bold type.

Species	Isolate numbers		Origin		GenBank accession numbers						
	International collections ^a	Local collections	Host	Location; year	Collector; reference	ITS	Btub	HSP90	Cox1	NADH1	
<i>Nothophytophthora amphigynosa</i> ^b	CBS 142348	BD268	Stream baiting; atlantic forest	Portugal; 2015	T. Jung; Jung <i>et al.</i> 2017c	KY788382	KY788515	KY788555	KY788473	KY788596	
<i>Phytophthora arenaria</i> ^c	IMI 389663	VHS 10154	<i>Banksia littoralis</i>	Australia (WA); 2002	VHS; Rea <i>et al.</i> ((2011))	EU301114	KJ372298	KJ396725	KJ396697	n.a.	
<i>P. arenaria</i> ^c		VHS 19931	<i>Banksia attenuata</i>	Australia (WA); 2008	VHS; Rea <i>et al.</i> ((2011))	HQ013217	KJ372293	KJ396720	KJ396694	n.a.	
<i>P. asparagi</i> ^b		VHS 17644	<i>Lomandra sonderi</i>	Australia (WA); 2007	VHS; Jung <i>et al.</i> ((2011))	EU301168	JN547592	HQ012891	HQ012845	JN547680	
<i>P. attenuata</i> ^b	CBS 141199	PD_02752	<i>Castanopsis carlesii</i>	Taiwan; 2013	T. Jung; Jung <i>et al.</i> ((2017b))	KU517154	KU899277	KU899434	KU517148	KU899519	
<i>P. attenuata</i> ^b	CBS 141200	TW118	<i>Chamaecyparis formosensis</i>	Taiwan; 2013	T. Jung; Jung <i>et al.</i> ((2017b))	KU899196	KU899274	KU899431	KU899351	KU899516	
<i>P. boodjera</i> ^c	CBS 138637	VHS 26806	Soil dump	Australia (WA); 2012	n.a.; Simamura <i>et al.</i> ((2015))	KJ372244	KJ372283	KJ396710	KJ396688	n.a.	
<i>P. boehmeriae</i> ^b	WPC P6950	MG 42-6	<i>Boehmeria nivea</i>	Taiwan; 1929	Sawada; Blair <i>et al.</i> (2008)	HQ643149	EU080162	EU080165	KT183047	DQ361200	
	PD_00181	45F9									
	CBS 291.29										
	IMI 180614										
<i>P. cactorum</i> ^b	WPC P11184	P0184	n.a.	Poland; 2003	L. Orlikowski & G.Szkuta; n.a.	FJ801579	EU080292	EU080295	n.a.	n.a.	
	PD_00944										
<i>P. cactorum</i> ^c	WPC P0715	Gallegly N93	n.a.	United Kingdom; 1921	E. Blackwell; n.a.	FJ801258	EU080285	EU080288	n.a.	n.a.	
	PD_00930										
	IMI 21168										
	ATCC 16693										
<i>P. cactorum</i> ^b		P6183	<i>Rubus idaeus</i>	USA (New York); n.a.	n.a.; Kroon <i>et al.</i> ((2004))	n.a.	AY564052	n.a.	AY564167	AY563994	
<i>P. cactorum</i> ^c		P167	<i>Mespilus germanica</i>	Hungary; 2007	J. Bakonyi; n.a.	EU109566	EU109575	n.a.	n.a.	EU109581	
<i>P. cactorum</i> ^c		414	Stream water	Finland; n.a.	A. Lijja & J. Hantula; Panek <i>et al.</i> (2016)	LN907642	n.a.	n.a.	LN907701	n.a.	
<i>P. capsici</i> ^b	RLW2002-MS8		<i>Cucurbita</i> sp.	USA (Massachusetts); n.a.	n.a.; Brazee <i>et al.</i> (2016)	KJ631548	KJ631575	n.a.	KJ631596	KU695492	

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin		GenBank accession numbers						
	International collections ^a	Local collections	Host	Location; year	Collector; reference	ITS	Btub	HSP90	Cox1	NADH1	
<i>P. capsici</i> ^b	WPC P10386	OP97	<i>Cucumis sativus</i>	USA (Michigan); 1997	K. Lamour; n.a.	HQ261520	EU079544	EU079547	n.a.	n.a.	
	PD_00091										
	CBS 121656										
<i>P. capsici</i> ^c	WPC P1319		<i>Capsicum annuum</i>	USA (California); 1983	L.A. Bower; Robideau et al. (2011)	HQ261519	EU079737	EU079740	n.a.	n.a.	
	PD_00118										
<i>P. capsici</i> ^c	ATCC 64808										
	IMI 352321	SCRIP103 AR 244	<i>Piper nigrum</i>	India; 1989	n.a.; Cooke et al. 2000	AF266787	DQ361138	n.a.	n.a.	DQ361203	
<i>P. capsici</i> ^c		UQ2819									
		PD98/9562	<i>Lycopersicon esculentum</i>	The Netherlands	n.a.	JX524164	n.a.	n.a.	JX524165	n.a.	
<i>P. castaneae</i> ^b	WPC P10187	ICMP 19434	<i>Castanea crenata</i>	Japan; 1970	K. Uchida; Weir et al. (2015)	HQ261601	EU080803	EU080806	AY564190	AY564017	
	PD_00074	NRBC 9753									
<i>P. castaneae</i> ^c	WPC P3389		n.a.	n.a.	n.a.	FJ801842	EU079815	EU079818	n.a.	n.a.	
	PD_00128										
<i>P. castaneae</i> ^c	IMI 98426										
	WPC 15598	ICMP 19450	Soil	Taiwan; 1979	H.S. Chang & W.H. Ko; Weir et al. (2015)	HQ643255	AY564075	n.a.	AY564190	KP295350	
	CBS 587.85										
	IMI 325914										
	ATCC 36818										
<i>P. castanetorum</i> ^{bde}	CBS 142299	BD 292	<i>Castanea sativa</i>	Portugal; 2015	T. Jung; this study	MF036182	MF036214	MF036240	MF036266	MF036292	
<i>P. castanetorum</i> ^{bde}		BD 293	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036183	MF036215	MF036241	MF036267	MF036293	
		BD 336	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036184	n.a.	n.a.	n.a.	n.a.	
<i>P. castanetorum</i> ^{bde}		BD 476	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036185	MF036216	MF036242	MF036268	MF036294	
		BD 484	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036186	MF036217	MF036243	MF036269	MF036295	
<i>P. castanetorum</i> ^{cd}		BD 485	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036187	n.a.	n.a.	n.a.	n.a.	
		BD 486	<i>C. sativa</i>	Portugal; 2015	T. Jung; this study	MF036188	n.a.	n.a.	n.a.	n.a.	
<i>P. castanetorum</i> ^{bdef}	CBS 142300	P14	<i>C. sativa</i>	Italy (Sardinia); 2014	B. Scanu & S. Seddaiu; this study	MF036189	MF036218	MF036244	MF036270	MF036296	

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin		Location; year	Collector; reference	GenBank accession numbers					
	International collections ^a	Local collections	Host	Host			ITS	Btub	HSP90	Cox1	NADH1	
<i>P. heveae</i> ^c	WPC P10167	p17	Forest soil	Forest soil	USA (Tennessee); 1964	W.A. Campbell; n.a.	GU259516	EU080796	EU080799	n.a.	n.a.	n.a.
	PD_00073	N331										
	IMI 131373											
	ATCC 16701											
<i>P. humicola</i> ^b	WPC P3826		Citrus soil	Citrus soil	Taiwan; 1977	P.J. Ann & W.H. Ko; Blair et al. 2008; Jung et al. (2011)	HQ643243	EU080169	EU080172	KF112862	AY564011	
	PD_00018											
	CBS 200.81											
	IMI 302303											
<i>P. ilicis</i> ^b	ATCC 52179											
	WPC P3939		<i>Ilex</i> sp.	<i>Ilex</i> sp.	Canada; 1988	n.a.; Blair et al. 2008	HQ261583	EU079860	EU079863	AY129172	n.a.	
	PD_00133		Hickman P22.1.1									
	CBS 555.88		Atkinson P-89									
<i>P. ilicis</i> ^b	CBS 255.93											
	ATCC 56615											
	CBS 114348		<i>Ilex aquifolium</i>	<i>Ilex aquifolium</i>	The Netherlands; n.a.	n.a.	JX524158	n.a.	n.a.	AY564186	AY564013	
	WPC P6860		Hamm 810	<i>I. aquifolium</i>	UK; before 1990	n.a.	HQ261580	EU080137	EU080139	n.a.	n.a.	
<i>P. infestans</i> ^b	PD_00178											
	WPC P10651		<i>Solanum tuberosum</i>	<i>Solanum tuberosum</i>	Uganda; 1998	n.a.	FJ801471	EU079633	EU079636	n.a.	n.a.	
	PD_00103											
	WPC P10650		MX980099	<i>S. tuberosum</i>	Mexico; 1998	n.a.; Blair et al. 2008	HQ261589	EU079626	EU079629	n.a.	n.a.	
<i>P. infestans</i> ^b	PD_00102											
	-		Pic99186	<i>Solanum stoloniferum</i>	Mexico; 1999	n.a.	AY770731	AY564035	n.a.	AY564150	AY563977	
	-		Df98004	<i>Solanum tuberosum</i>	The Netherlands; 1998	n.a.	n.a.	AY564036	n.a.	AY564151	AY563978	
	WPC P6195		38E1	Soil in Citrus orchard	Taiwan; 1979	P.J. Ann & K.W. Ko; Gallegly & Hong 2008	GU259059	EU080176	EU080179	AY564188	DQ361206	
<i>P. intricata</i> ^b	PD_00175											
	CBS 691.79											
	IMI 288805											
	ATCC 38789											
CBS 141211		TW259	<i>Quercus farokoensis</i>	Taiwan; 2013	T. Jung; Jung et al. (2017b)	KU517155	KU899284	KU899441	KU517149	KU899526		

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin		GenBank accession numbers						
	International collections ^a	Local collections	Host	Location; year	Collector; reference	ITS	Btub	HSP90	Cox1	NADH1	
<i>P. multivesiculata</i> ^c	WPC P10525	PD 95/4744	<i>Cymbidium</i> sp.	The Netherlands; 1995	W. Veenbaas-Rijks; Ilieva <i>et al.</i> 1998	FJ802101	EU079588	EU079591	n.a.	n.a.	
	PD_00097										
	CBS 101594										
<i>P. multivora</i> ^b	WPC 19594	WAC13201	<i>Eucalyptus marginata</i>	Australia (WA); n.a.	VHS; Scott <i>et al.</i> 2009	FJ237521	FJ665260	KP295296	FJ237508	KP295354	
	PD_02829	ICMP19454									
<i>P. multivora</i> ^b	CBS 124094	RHS226.2001	<i>Ceanothus</i> sp.	UK	B. Henricot; Henricot <i>et al.</i> (2014)	KC855319	KC855343	n.a.	KC855415	KC855391	
<i>P. nemorosa</i> ^b	WPC P19600	41C4	<i>Notholithocarpus densiflorus</i>	USA (California); before 2003	E.M. Hansen & P. Reeser; Hansen <i>et al.</i> 2003	KF317082	DQ361148	n.a.	KF317104	DQ361211	
	CBS 114870	P13									
	ATCC MYA 2948	MG 42-7									
<i>P. nemorosa</i> ^b	WPC P10612	Gallegly p141	<i>Umbellularia californica</i>	USA (California); before 2003	E.M. Hansen & P. Reeser; Hansen <i>et al.</i> 2003	FJ801460	EU079600	EU079603	n.a.	n.a.	
<i>P. nemorosa</i> ^c	PD_00099	Rizzo 1125	<i>N. densiflorus</i>	USA (California); before 2003	K. Ivors; n.a.	HQ261628	EU079475	EU079478	n.a.	n.a.	
	WPC 10288										
<i>P. nicotianae</i> ^b	PD_00081	-	<i>Persea americana</i>	Mexico; 1990	B. Tlapai; n.a.	HQ261629	EU079556	EU079559	n.a.	n.a.	
<i>P. nicotianae</i> ^c	WPC P17146										
	PD_00393										
<i>P. nicotianae</i> ^c	WPC P10802	CH 87CM1	<i>Dianthus caryophyllus</i>	Japan; 1987	n.a.	FJ801517	EU080716	EU080719	n.a.	n.a.	
	PD_00007	Manuyama1									
<i>P. nicotianae</i> ^b	-	P582	<i>Nicotiana tabacum</i>	USA (Kentucky); n.a.	n.a.; Kroon <i>et al.</i> (2004)	n.a.	AY564081	n.a.	AY564196	AY564023	
<i>P. nicotianae</i> ^c	-	STE-U 6273	<i>Agathosma betulina</i>	South Africa; 2005	C.M. Bezuidenhout; Bezuidenhout <i>et al.</i> 2010	GU902246	GU191318	n.a.	n.a.	GU191245	
	-										
<i>P. nicotianae</i> ^c	ATCC MYA-4037	22F9	<i>Nicotiana tabacum</i>	USA (North Carolina); n.a.	n.a.; Gallegly & Hong 2008	KF317070	n.a.	n.a.	KF317091	n.a.	
	CBS 124086	P214	<i>C. lawsoniana</i>	Hungary; 2007	A. Józsa; Józsa <i>et al.</i> 2010	GU230789	GU477613	KU899389	GU477617	GU477619	
<i>P. palmivora</i> ^b	WPC P0255		<i>Theobroma cacao</i>	Costa Rica; 1964	E. Zentmyer & Romero; n.a.	HQ261635	EU080339	EU080342	n.a.	n.a.	
	PD_00022										
<i>P. palmivora</i> ^b	ATCC 26200										
	CBS 236.30		<i>Cocos nucifera</i>	India; before 1930	n.a.	n.a.	AY564082	n.a.	AY564197	AY564024	

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin	Location; year	Collector; reference	GenBank accession numbers					
	International collections ^a	Local collections				Host	ITS	Btub	HSP90	Cox1	NADH1
<i>P. quercina</i> ^{be}		Beja 5 BD549 P734	<i>Q. ilex</i>	Portugal; 2010	T. Jung; this study	MF036193	MF036222	MF036248	MF036274	MF036300	
<i>P. quininea</i> ^b	WPC P1089 WPC P8488 CBS 407.48 ATCC 46733	46C4 p386 CMW 31062	<i>Cinchona officinalis</i>	Peru; before 1947	B.S. Crandall; Blair <i>et al.</i> 2008	HQ643338	AY564085	n.a.	AY564200	AY564027	
<i>P. quininea</i> ^b	WPC P3247 WPC P3608 CBS 406.48 ATCC 56964	45F2 p344	<i>C. officinalis</i>	Peru; before 1947	B.S. Crandall; n.a.	HQ261661	EU079803	EU079805	n.a.	n.a.	
<i>P. rubi</i> ^b	CBS 967.95 WPC P16899 IMI 355974 ATCC 90442	FVR 11 SCR333 R49 P822	<i>R. idaeus</i>	UK; 1985	D. Kennedy; Man In't Veld (2007)	AF139370	KU899234	KU899391	DQ674736	KU899476	
<i>P. rubi</i> ^b		CH-106 P713	<i>R. idaeus</i>	Sweden; n.a.	C. Olsson; Jung <i>et al.</i> (2017b)	KU899180	KU899256	KU899413	KU899335	KU899498	
<i>P. samsomeana</i> ^b	n.a.	n.a.	<i>Glycine max</i>	China; n.a.	n.a.; Tang <i>et al.</i> 2010	FJ966880	FJ966879	n.a.	FJ966881	FJ966877	
<i>P. samsomeana</i> ^b	CBS 117692 WPC P3163 PD_01115	OSU 72	<i>Silene latifolia</i> subsp. <i>alba</i>	USA (New York); n.a.	E.M. Hansen; Hansen <i>et al.</i> 2009	HQ261669	EU080271	EU080274	n.a.	n.a.	
<i>P. stricta</i> ^c	ATCC MYA-4944	58A1	Nursery irrigation reservoir	USA (Virginia); n.a.	n.a.; Yang <i>et al.</i> (2014)	KF192694	n.a.	n.a.	n.a.	n.a.	
<i>P. tropicalis</i> ^b	WPC P10329 CBS 434.91 PD_00020	H245-24	<i>Macadamia integrifolia</i>	USA (Hawaii); 1975	M. Aragaki; Blair <i>et al.</i> 2008	HQ643369	EU080306	EU080309	n.a.	n.a.	
<i>P. tropicalis</i> ^b		AN97/86 PD97/11132	<i>Rosa spp.</i>	The Netherlands; 1997	n.a.	n.a.	AY564046	n.a.	AY564161	AY563988	
<i>P. tropicalis</i> ^c		NRCPH-179	<i>Citrus sp.</i>	India; n.a.	A.K. Das; n.a.	KP698409	n.a.	n.a.	KP698412		
<i>P. tropicalis</i> ^c	WPC P10452 PD_00052		Nursery recycling water	USA (California); 2002	D. Ferrin; n.a.	n.a.	EU080620	EU080623	n.a.	n.a.	
<i>P. tubulina</i> ^{b,def}	CBS 141212	TUB 1 P736	<i>Fagus sylvatica</i>	Austria; 2010	T. Jung; this study	MF036196	MF036225	MF036251	MF036277	MF036303	

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin		GenBank accession numbers							
	International collections ^a	Local collections	Host		Location; year	Collector; reference	ITS	Btub	HSP90	Cox1	NADH1	
<i>P. tubulina</i> ^{bolef}	CBS 141213	TUB 2 P737	<i>F. sylvatica</i>		Austria; 2010	T. Jung; this study	MF036197	MF036226	MF036252	MF036278	MF036304	
<i>P. tubulina</i> ^{boe}		TUB 3	<i>F. sylvatica</i>		Austria; 2010	T. Jung; this study	MF036198	MF036227	MF036253	MF036279	MF036305	
<i>P. tubulina</i> ^{boe}		TUB 4	<i>F. sylvatica</i>		Austria; 2010	T. Jung; this study	MF036199	MF036228	MF036254	MF036280	MF036306	
<i>P. tubulina</i> ^{boe}		TUB 5	<i>F. sylvatica</i>		Austria; 2010	T. Jung; this study	MF036200	MF036229	MF036255	MF036281	MF036307	
<i>P. tyrrhenica</i> ^{bolef}	CBS 142301	PH154	<i>Q. ilex</i>		Italy (Sardinia); 2012	B. Scanu; this study	KU899188	KU899265	KU899422	KU899343	KU899507	
<i>P. tyrrhenica</i> ^{boe}		PH155	<i>Q. ilex</i>		Italy (Sardinia); 2012	B. Scanu; this study	KU899189	KU899266	KU899423	KU899344	KU899508	
<i>P. tyrrhenica</i> ^{bolef}	CBS 142303	PH103	<i>Quercus suber</i>		Italy (Sardinia); 2012	B. Scanu and S. Seddaiu; this study	MF036208	MF036234	MF036260	MF036286	MF036312	
<i>P. tyrrhenica</i> ^{bd}	CBS 142302	TYR 1	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036201	MF036230	MF036256	MF036282	MF036308	
<i>P. tyrrhenica</i> ^{cd}		TYR 2	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036202	n.a.	n.a.	n.a.	n.a.	
<i>P. tyrrhenica</i> ^{bd}		TYR 3	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036203	MF036231	MF036257	MF036283	MF036309	
<i>P. tyrrhenica</i> ^{bd}		TYR 4	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036204	MF036232	MF036258	MF036284	MF036310	
<i>P. tyrrhenica</i> ^{bd}		TYR 5	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036205	MF036233	MF036259	MF036285	MF036311	
<i>P. tyrrhenica</i> ^{cdle}		TYR 6	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036206	n.a.	n.a.	n.a.	n.a.	
<i>P. tyrrhenica</i> ^{cdle}		TYR 7	<i>Q. ilex</i>		Italy (Sicily); 2015	T. Jung; this study	MF036207	n.a.	n.a.	n.a.	n.a.	
<i>P. uliginosa</i> ^b	CBS 109054	ULI 1 50A2	<i>Q. robur</i>		Poland; 1998	T. Jung; Jung <i>et al.</i> (2002)	AF449495	EU080012	EU080014	KU681023	KU899471	
	WPC P10413											
	WPC P16835											
	PD_00157											
<i>P. uliginosa</i> ^c	CBS 109055	ULI 2	<i>Quercus petraea</i>		Germany; 1998	T. Jung; Jung <i>et al.</i> (2002)	HQ261722	EU079693	EU079696	n.a.	n.a.	
	WPC P10328											
	PD_00012											
<i>P. uniformis</i> ^b	-	ALN 58 P705	<i>A. glutinosa</i>		Germany; 1998	T. Jung; Jung <i>et al.</i> (2017b)	KU899173	KU899249	KU899406	KU899328	KU899491	

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	International collections ^a	Local collections	Host	GenBank accession numbers			ITS	Btub	HSP90	Cox1	NADH1		
<i>P. uniformis</i> ^b	-	P876	<i>A. glutinosa</i>	Sweden; 1997	C. Olsson; Brasier et al. (2004); Jung et al. (2017b)	KU681016	KU899260	KU899417	KU681019	KU899502			
<i>P. versiformis</i> ^b	CBS 142005	TP13.46	<i>C. calophylla</i>	Australia (WA); 2013	T. Paap; Paap et al. 2017	KX011279	KX011321	KX011256	KX011222	KX011302			
<i>P. versiformis</i> ^b	-	PAB11.79	<i>Corymbia calophylla</i>	Australia (WA); 2011	P. Barber; Barber et al. (2013)	KC748463	KX011311	KX011260	KX011225	KX011308			
<i>P. versiformis</i> ^b	-	TP13.10	<i>C. calophylla</i>	Australia (WA); n.a.	T. Paap; Paap et al. 2017	KX011275	KX011315	KX011252	KX011227	KX011303			
<i>P. versiformis</i> ^b	-	TP13.29	<i>C. calophylla</i>	Australia (WA); 2013	T. Paap; Paap et al. 2017	KX011277	KX011318	KX011254	KX011220	KX011299			
<i>P. versiformis</i> ^b	-	TP13.34	<i>C. calophylla</i>	Australia (WA); n.a.	T. Paap; Paap et al. 2017	KX011283	KX011319	KX011262	KX011223	KX011310			
<i>P. vulcanica</i> ^{bde}	CBS 141216	X3a	<i>F. sylvatica</i>	Italy (Sicily); 2013	T. Jung; this study	MF036209	MF036235	MF036261	MF036287	MF036313			
<i>P. vulcanica</i> ^{bde}	CBS 141217	X3b	<i>F. sylvatica</i>	Italy (Sicily); 2013	T. Jung; this study	MF036210	MF036236	MF036262	MF036288	MF036314			
<i>P. vulcanica</i> ^{bde}	-	X3c	<i>F. sylvatica</i>	Italy (Sicily); 2013	T. Jung; this study	MF036211	MF036237	MF036263	MF036289	MF036315			
<i>P. vulcanica</i> ^{bdef}	-	X3d	<i>F. sylvatica</i>	Italy (Sicily); 2013	T. Jung; this study	MF036212	MF036238	MF036264	MF036290	MF036316			
<i>P. vulcanica</i> ^{bdef}	-	X3e	<i>F. sylvatica</i>	Italy (Sicily); 2013	T. Jung; this study	MF036213	MF036239	MF036265	MF036291	MF036317			
<i>P. xalni</i> ^b	IMI 392314 WPC P16203 PD PD_02130	P772	<i>A. glutinosa</i>	UK; 1994	G. Mac Askil; Brasier et al. (2004); Jung et al. (2017b)	KU681013	KU899238	KU899395	KU681017	KU899480			
<i>P. xalni</i> ^b	-	Reis 2 P691	<i>A. glutinosa</i>	Germany; 2014	T. Jung; Jung et al. (2017b)	KU899168	KU899244	KU899401	KU899323	KU899486			
<i>P. xcambivora</i> ^{bf}	CBS 141218	IT 5-3 P711	<i>Quercus pubescens</i>	Italy (Sicily); 2013	T. Jung; Jung et al. (2017b)	KU899179	KU899255	KU899412	KU899334	KU899497			
<i>P. xcambivora</i> ^b	-	4044.1	<i>Chrysolepis chrysophylla</i>	USA (Oregon); 2001	A. Saavedra; Saavedra et al. (2007); Jung et al. (2017b)	KU899151	KU899223	KU899378	KU899306	KU899463			
<i>P. xheterohybrida</i> ^b	CBS 141207	P513 TW30	Baiting; tributary of Ha-pen River	Taiwan; 2013	T. Jung; Jung et al. (2017b)	KU517151	KU899290	KU899447	KU517145	KU899532			
<i>P. xheterohybrida</i> ^b	-	TW32	Baiting; tributary of Ha-pen River	Taiwan; 2013	T. Jung; Jung et al. (2017b)	KU899210	KU899292	KU899449	KU899365	KU899534			
<i>P. xincrassata</i> ^b	CBS 141209	TW269	Baiting; tributary of Ha-pen River	Taiwan; 2013	T. Jung; Jung et al. (2017b)	KU517156	KU899286	KU899443	KU517150	KU899528			

Supplementary Table 1. (Continued).

Species	Isolate numbers		Origin	Location; year	Collector; reference	GenBank accession numbers					
	International collections ^a	Local collections				Host	ITS	Btub	HSP90	Cox1	NADH1
<i>P. xincassata</i> ^b	CBS 141208	TW283	Baiting; tributary of Ha-pen River	Taiwan; 2013	T. Jung; Jung <i>et al.</i> (2017b)	KU899206	KU899287	KU899444	KU899361	KU899529	
<i>P. xmultiformis</i> ^b	IMI 392316 WPC P16202 PD PD_01913	P770	<i>A. glutinosa</i>	Netherlands; 1994	H. van Kesteren, Brasier <i>et al.</i> (2004); Jung <i>et al.</i> (2017b)	AF139368	KU899239	KU899396	KU681018	KU899481	
<i>P. xmultiformis</i> ^b	-	PAM 396	<i>A. glutinosa</i>	France; 2007	T. Scordia; Husson <i>et al.</i> (2015); Jung <i>et al.</i> (2017b)	KU899184	KU899261	KU899418	KU899339	KU899503	
<i>P. sp. ohioensis</i> ^b	WPC P16050 PD PD_01627 PD PD_02093 ATCC MYA-4452	ST 18-37	<i>Quercus alba</i>	USA (Ohio); 2006	Y. Balci; Martin <i>et al.</i> (2014).	HQ261710	KX011324	KX011259	GU594815	KX011307	
<i>P. sp. quercina</i> -like ^c	ATCC MYA-4090	MN 023	<i>Quercus rubra</i>	USA; 2004	Y. Balci; Balci <i>et al.</i> (2007)	DQ313224	n.a.	n.a.	n.a.	n.a.	
<i>P. sp. versiformis</i> -like ^b	-	MJ5	<i>C. calophylla</i>	Australia (WA); 2013	L. Croeser; Paap <i>et al.</i> 2017	KX011271	KX011325	KX011248	KX011216	KX011296	
<i>P. sp. versiformis</i> -like ^b	-	TP13.14	<i>C. calophylla</i>	Australia (WA); 2013	T. Paap; Paap <i>et al.</i> 2017	KX011276	KX011316	KX011253	KX011217	KX011297	
<i>P. sp. xcambivora</i> -like ^b	CBS 111329		<i>Malus pumila</i> var. <i>dulcissima</i>	South Korea; 1996	H-J. Jee; Jee <i>et al.</i> 1997; Jung <i>et al.</i> (2017b)	KU899158	KU899230	KU899386	KU899313	KU899472	
<i>P. sp. xmultiformis</i> -like ^b	-	4971496 P693	<i>A. glutinosa</i>	Netherlands; 2011	K. Rosendahl & W. Man In 't Veld; Jung <i>et al.</i> (2017b)	KU899170	KU899246	KU899403	KU899325	KU899488	

n.a. = not available; authentic strains, ex-types, isotypes, neotypes and paratypes are printed in bold-type.

^a Abbreviations of isolates and culture collections: ATCC = American Type Culture Collection, Manassas, USA; CBS = CBS collection at the Westerdijk Fungal Biodiversity Institute (previously Centraalbureau voor Schimmelcultures), Utrecht, Netherlands; IMI = CABI Bioscience, UK; PD = Phytophthora Database (<http://www.phytophthora.org>); VHS = Vegetation Health Service Collection, Department of Environment and Conservation, Perth, Australia; WPC = World Phytophthora Collection, University of California Riverside, USA; other isolate names and numbers are as given by the collectors and on GenBank, respectively.

^b Isolates used in phylogenetic studies of both multigene sequence alignments and individual genes.

^c Isolates used only in phylogenetic studies of individual genes.

^d Isolates used in the morphological studies.

^e Isolates used in the temperature-growth studies.

^f Isolates used in the soil infestation trials.