

Additional file 1. List of species/strains used in this study and relevant information pertaining to them. GenBank accession numbers are given for each genomic region analysed in this study. Sequences retrieved from the CBS culture collection database ('CBS seq.') or from genome projects ('JGI genome') are indicated. Mating behaviour as originally determined by classical mating tests ('old') and as now reassigned based on the molecular data ('new') is indicated when needed: A1, A2, As and Sf stands for mating type A1, A2, asexual and self-fertile strains, respectively. The "molecular mating type" as identified by PCR detection of the pheromone receptor alleles *STE3.A1* and *STE3.A2* is depicted by yellow and blue circles, respectively. White circles indicate strains for which PCR detection produced negative results and 'n.d.' stands for 'not determined'. Strains highlighted in **boldface** were used in the figure 1 and those indicated by thick-lined blue or yellow circles were used in figure 2. Sequences accession number of the *HD1/HD2* alleles used in Figures 4b and 4c are also highlighted in **boldface**. Abbreviations: *Rhodospiridium* (R.), *Rhodotorula* (Rh.), *Sporidiobolus* (S.), *Sporobolomyces* (Sp.), Type strain (T), Lectotype (LT), Authentic strain (AUT). Undescribed species included in this study are shadowed in light yellow and those for which no molecular mating type was accessed are shadowed in gray.

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		<i>STE3</i> A1	<i>STE3</i> A2	<i>STE3.A1</i> (GenBank)	<i>STE3.A2</i> (GenBank)	<i>HD1/HD2</i> (GenBank)	Isolation source and location
				Old	New						
<i>R. babjevae</i>	A122			As		●				HM143851	Seawater, South of Portugal
<i>R. babjevae</i>	A125			As		●					Seawater, South of Portugal
<i>R. babjevae</i>	A267			As		●					Seawater, South of Portugal
<i>R. babjevae</i>	A270			As		●					Seawater, South of Portugal
<i>R. babjevae</i>	CBS 322			As		●					Water supply of brewery, Germany
<i>R. babjevae</i>	CBS 2366			As			●			JN246619	Air, Japan
<i>R. babjevae</i>	CBS 6020			As		●				JN246620	Soil from drill core, Japan
<i>R. babjevae</i>	CBS 7808^T	AF070420	AF444542	A1		●		JN246636		HM143857	Herbaceous plant, Moscow, Russia
<i>R. babjevae</i>	CBS 7809	AF389828	AF387773	A2			●		JN246573	HM143856	Herbaceous plant, Moscow, Russia
<i>R. babjevae</i>	CBS 9071			A2			●			JN246621	Barley kernels, North Dakota, USA
<i>R. babjevae</i>	CBS 9072			As			●		JN246575	HM143852	Barley kernels, North Dakota, USA
<i>R. babjevae</i>	CRUB 1025			A1		●				JN246614	Nahuel Huapi, Patagonia, Argentina
<i>R. babjevae</i>	CRUB 1033			Sf			●			JN246615	Verde Lagoon, Patagonia, Argentina
<i>R. babjevae</i>	CRUB 1034			As		●				JN246616	Verde Lagoon, Patagonia, Argentina
<i>R. babjevae</i>	CRUB 1037			As		●				HM143854	Fonk Lake, Patagonia, Argentina
<i>R. babjevae</i>	CRUB 1113			As			●				Verde Lagoon, Patagonia, Argentina
<i>R. babjevae</i>	PTZ 001			A1		●		JN246641			Herbaceous plant, Prioksko-terrasny reserve, Moscow, Russia
<i>R. babjevae</i>	PTZ 111			A1		●					Herbaceous plant, Prioksko-terrasny reserve, Moscow, Russia
<i>R. babjevae</i>	PYCC 4651			As		●					Leaf, Estoril, Portugal
<i>R. babjevae</i>	PYCC 4777			As		●		JN246638		HM143855	Flower, Oeiras, Portugal

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>R. babjevae</i>	PYCC 4915	AF389825	AF387770	As		●		JN246639		HM143853	Pond water, Silwood, UK
<i>R. babjevae</i>	VKM Y-1310			A1		●		JN246640		JN246617	Silage, Kiev region, Ukraine
<i>R. babjevae</i>	VKM Y-1629			A2			●			JN246618	Soil, Krasnodar region, Russia
<i>R. babjevae</i>	VKM Y-1631			A2			●				Soil, Krasnodar region, Russia
<i>R. babjevae</i>	VKM Y-2911			Sf		●	●	JN246637	JN246574		Soil, Komi Republic, Russia
<i>Rh. graminis</i>	AJ 130			As			●		JN246578	JN246634	Soil in <i>Nothofagus</i> forest, Tongario National Park, New Zealand
<i>Rh. graminis</i>	AJ 132			As			●			JN246635	Soil in <i>Podocarpus</i> forest, Pureora Forest Park, New Zealand
<i>Rh. graminis</i>	CBS 2826^T	AF070431	AF444505	As			●		JN246576	JN246632	Grass, New Zealand
<i>Rh. graminis</i>	CBS 3043	AF387130	AF387780	As			●		JN246577	JN246633	Leaf of <i>Citrus</i> sp., Indonesia
<i>Rh. graminis</i>	WP1			n.d.			●		JGI Genome	JGI Genome	Isolated as an endophyte within <i>Populus trichocarpa</i> (black cottonwood), Western Washington state, USA
<i>Rh. glutinis</i>	C13A1	JN246532	JN246543	As		●		JN246643		JN246631	Fruiting body of <i>Cyttaria hariotii</i> , Patagonia, Argentina
<i>Rh. glutinis</i>	CBS 20^T	AF070430	AF387775	As		●		JN246644		JN246626	Air, unknown location
<i>Rh. glutinis</i>	CBS 2367			As		●		JN246647		JN246627	Fruit of <i>Phyllocladon</i> sp., Botanic Garden, Florence, Italy
<i>Rh. glutinis</i>	JCM 3907	DQ531948	AB073237	As		●		JN246642		JN246628	Unknown
<i>Rh. glutinis</i>	PYCC 4107			As		●		JN246646		JN246629	Seawater, Florida, USA
<i>Rh. glutinis</i>	PYCC 5599	AF387132	AF387777	As		●		JN246645		JN246630	Core samples from stratigraphic drillings, Japan
<i>R. diobovatum</i>	CBS 324			A1		●		JN246649		JN246623	Unknown substrate, Portugal
<i>R. diobovatum</i>	CBS 6084	AF189914	AB073236	A2			●		JN246579	JN246624	Seawater, South-eastern barrier reef, Florida, USA
<i>R. diobovatum</i>	CBS 6085^T	AF070421	AF387782	A1		●		JN246648		JN246625	Seawater, South-eastern barrier reef, Florida, USA
<i>R. diobovatum</i>	PYCC 2920			A2			●		JN246580	JN246622	Seawater, Scripps pier, USA
" <i>Rh. pinicorticis</i> "	PYCC 4826^T	AF387134	JN246544	As		○	○				Bark of <i>Pinus pinaster</i> , Sesimbra, Portugal
<i>R. kratochvilovae</i>	A113			As			●				Under thermocline, Algarve, Portugal
<i>R. kratochvilovae</i>	CBS 7293			Sf		●	●				Unknown
<i>R. kratochvilovae</i>	CBS 7436^T	AF071436	AF444520	Sf		●	●	JN246651	JN246584		Unknown
<i>R. kratochvilovae</i>	CRUB 0014			As		●		JN246652			<i>Rubus idaeus</i> , Patagonia, Argentina
<i>R. kratochvilovae</i>	CRUB 0121			A2			●				Lake Toncek, Argentina

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>R. kratochvilovae</i>	CRUB 1035			A2			●		JN246583		Lake Escondido, Argentina
<i>R. kratochvilovae</i>	PYCC 4776			A2			●				Plant leaf, Oeiras, Portugal
<i>R. kratochvilovae</i>	PYCC 4785			A2			●		JN246585		Humus, Arrábida, Portugal
<i>R. kratochvilovae</i>	PYCC 4818	AF1899116	AF444586	A1		●		JN246653			Wood chips, Setúbal, Portugal
<i>R. kratochvilovae</i>	PYCC 4819	AF189917	AF444587	A2			●		JN246581		Moss, Oeiras, Portugal
<i>R. kratochvilovae</i>	PYCC 5068			A2			●				Soil, Azores, Portugal
<i>R. kratochvilovae</i>	PYCC 5085			A2			●		JN246582		Soil, Azores, Portugal
<i>R. kratochvilovae</i>	PYCC 5244			A1		●		JN246650			Culture contaminant, Oeiras, Portugal
<i>Rh. araucariae</i>	CBS 6031^T	AF070427	AF444510	As			●		JN246586		Rotting bark of <i>Araucaria araucana</i> (monkey-puzzle tree) Llaima, Chile
<i>Rh. araucariae</i>	CBS 7797			As			●		JN246587		Unknown
<i>Rh. araucariae</i>	PYCC 4820	AF387135	JN246545	As		●	●	JN246654	JN246588		Plant litter, Oeiras, Portugal
<i>Rh. araucariae</i>	PYCC 4821			As			●				Humus, Arrábida Natural Park, Portugal
<i>Rh. araucariae</i>	ZP 280			As			●				Plant litter, Sintra, Portugal
<i>"Rh. hamamotoiana"</i>	PYCC 4724	AF387137	JN246547	As			●		JN246589		Soil, Alentejo, Portugal
<i>"Rh. hamamotoiana"</i>	PYCC 4824^T	AF387138	JN246546	As		●		JN246656			Rotten wood, Gerês, Portugal
<i>"Rh. sesimbrana"</i>	PYCC 4691^T	AF387144	JN246548	As		●		JN246657			Bark of <i>Pinus pinaster</i> , Sesimbra, Portugal
<i>R. paludigenum</i>	CBS 4477			A2 ^(a)		●		JN246658			Sea-water, Biscayne Bay, Florida, USA
<i>R. paludigenum</i>	CBS 6565			A1 ^(a)			●		JN246591		<i>Rhizophora mangle</i> (mangrove), swamp, Southern Florida, USA
<i>R. paludigenum</i>	CBS 6566^T	AF363640	AF363640	A2			●		JN246590		<i>Juncus roemerianus</i> (black rush), marsh, Florida, USA
<i>R. paludigenum</i>	CBS 6567	AF070424	AF444493	A1		●		JN246659			<i>Rhizophora mangle</i> (mangrove), swamp, Southern Florida, USA
^(a) The molecular mating type of strains CBS 4477 and CBS 6565 is not in agreement with the original mating type designation. However, when crossing CBS 6566 ^T and CBS 4474 a positive result was obtained, indicating that the analysed strains are in fact of opposite mating types. A confirmation of this result is needed for the original strains deposited at the CBS culture collection.											
<i>R. toruloides</i>	A405			A2			●		JN246596		Rio Tinto, Spain
<i>R. toruloides</i>	A421			A1		●					Rio Tinto, Spain
<i>R. toruloides</i>	CBS 14	AF207884	AB049028	A1		●		JN246660			Wood pulp from Coniferae, Sweden
<i>R. toruloides</i>	CBS 315			A1		●		JN246663			Tokyo, Japan (type strain of <i>Rhodotorula rubescens</i>)
<i>R. toruloides</i>	CBS 350			A1		●					Wood pulp from conifer, Sweden

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>R. toruloides</i>	CBS 5745			A2			●		JN246594		Soil, Nishiyama oil field, Japan
<i>R. toruloides</i>	CBS 6016^T	CBS seq.	CBS seq.	Sf		●	●	JN246662	JN246595		Unknown, [Hybrid]: cross of IFO 0559 x IFO 0880 (CBS 14 X CBS 349)
<i>R. toruloides</i>	PYCC 4350			A2			●				Unknown
<i>R. toruloides</i>	PYCC 4661			A2			●				Woodland soil, Alentejo, Portugal
<i>R. toruloides</i>	PYCC 4786			A2			●				Dry leaf, Jardim Botânico, Rio de Janeiro, Brasil
<i>R. toruloides</i>	PYCC 4943			A2			●				Pond of solar saltern, Alcochete, Portugal
<i>R. toruloides</i>	PYCC 5081	JN246533	JN246549	A2			●		JN246593		Soil, Azores, Portugal
<i>R. toruloides</i>	PYCC 5082			A1		●		JN246661			Soil, Azores, Portugal
<i>R. toruloides</i>	PYCC 5109			A2			●		JN246592		Salt farm, Alcochete, Portugal
<i>R. toruloides</i>	SDY 231			A1		●					Acidic mine water, S. Domingos, Portugal
<i>Rh. dairenensis</i>	CBS 2202	JN246535	JN246550	As		○					Soil, USA
<i>Rh. dairenensis</i>	CBS 4406^{LT}	AF070429	AF444501	As			●		JN246597		Air, unknown location
<i>Rh. dairenensis</i>	CBS 7294			As		○					Unknown
<i>Rh. dairenensis</i>	PYCC 4784	AY033551	AF444683	As			●		JN246598		Plant litter, Arrábida, Portugal
<i>Rh. dairenensis</i>	PYCC 4897			As			●				Flower of <i>Canna indica</i> , Azores, Portugal
<i>Rh. dairenensis</i>	PYCC 4944			As			●				Salt farm, Alcochete, Portugal
<i>Rh. dairenensis</i>	PYCC 5601			As		○					Core samples from stratigraphic drillings, Japan
<i>Rh. mucilaginosa</i>	CBS 17	AF189960	AF444503	As		○	○				Unknown
<i>Rh. mucilaginosa</i>	CBS 316^T	AF070432	AF444541	As		○	○				Unknown
<i>Rh. mucilaginosa</i>	CBS 325			As		○	○				Air, Tokyo, Japan
<i>Rh. mucilaginosa</i>	CBS 326			As		○	○				Air, unknown location
<i>Rh. mucilaginosa</i>	CBS 992			As		○	○				Nail of 12-year-old girl, Austria
<i>Rh. mucilaginosa</i>	CBS 1011			As		○	○				Ulcer of man, Madagascar
<i>Rh. mucilaginosa</i>	CBS 2377			As		○	○				Skin, scrapings from axillary region of man,
<i>Rh. mucilaginosa</i>	CBS 2404			As		○	○				Fermenting Kentucky tobacco, Salerno, Italy
<i>Rh. mucilaginosa</i>	CBS 5804			As		○	○				Larvae of <i>Drosophila pilimanae</i> (fruit fly), Hawaii, USA
<i>Rh. mucilaginosa</i>	CBS 5951			As		○	○				Gut of <i>Guara rubra</i> (red ibis bird), Paris Zoological Park, France

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>Rh. pacifica</i>	SY-246	AB193175	AB193175	A1		○	○				Sediments, deep-sea floor (900 m), Iheya Ridge, Pacific Ocean
<i>Rh. pacifica</i>	SY-96^T	AB026006	AB026006	A2		○	○				Sediments, deep-sea floor (3700 m), Yap Trench, Pacific Ocean
<i>R. sphaerocarpum</i>	CBS 5939^T	AF070425	AF444499	A2	A1	○	○				Seawater, Marguerite Bay, Antarctica
<i>R. sphaerocarpum</i>	CBS 5940			A1	A2	○	○				Seawater, Gerlache Straits near Anvers Island, Antarctica
<i>R. sphaerocarpum</i>	CBS 5941	AF189919	AB073259	Sf		○	○				Sea water, Gerlache Straits near Brabant Island, Antarctica
<i>R. sphaerocarpum</i>	CBS 6985			A2	A1	○	○				Salt farm, Seto Inland Sea, Yoshima, Japan
<i>R. sphaerocarpum</i>	PYCC 2988	JN246534	JN246551	A2 ^(b)	A1	●		JN246664			Unknown
<i>R. sphaerocarpum</i>	PYCC 5105			A2	A1	○	○				Salt farm, Alcochete, Portugal
<i>R. sphaerocarpum</i>	PYCC 5106			A2	A1	○	○				Salt farm, Alcochete, Portugal
<i>R. sphaerocarpum</i>	PYCC 5107			A1	A2	○	○				Salt farm, Alcochete, Portugal
<i>R. sphaerocarpum</i>	PYCC 5108			A1	A2	○	○				Salt farm, Alcochete, Portugal
<i>R. sphaerocarpum</i>	ZP 417			A2	A1	○	○				Mud from salt marsh, Tróia, Portugal
^(b) The molecular mating type of strain PYCC 2988 indicates that, despite originally designated as MAT A2, in fact is a MAT A1 strain. However, no positive results were obtained for the other strains of the same mating type.											
<i>Rh. taiwanensis</i>	BCRC 23118 ^T	GU646863	GUG46862			n.d.	n.d.				
" <i>Rh. pyritica</i> "	PYCC 4782			As		○	○				Wood of <i>Quercus suber</i> , Arrábida, Portugal
" <i>Rh. pyritica</i> "	PYCC 5597	AF387139	JN246552	As		○	○				Unknown (IAM 12959)
" <i>Rh. pyritica</i> "	RT 4.5.3			As		○	○				Acidic water, Rio Tinto, Spain
" <i>Rh. pyritica</i> "	SDY 119^T	AY731799	JN246553	As		○	○				Acid mine water, S. Domingos, Portugal
" <i>R. feracius</i> "	PYCC 5380	AF387143	JN246554	As		○	○				Soil, Azores, Portugal
" <i>R. feracius</i> "	SDY 020^T	AY731800	JN246555	Sf		○	○				Acidic mine water, S. Domingos, Portugal
" <i>R. feracius</i> "	SDY 080			As		○	○				Acidic mine water, S. Domingos, Portugal
" <i>R. feracius</i> "	SDY 176			Sf		○	○				Acidic mine water, S. Domingos, Portugal
<i>R. azoricum</i>	CBS 4648	DQ531944	JN246556	A1	A2		●		JN246600		Cacao, unknown location
<i>R. azoricum</i>	CBS 8948	AF321978	CBS Seq.	A2	A1	●		JN246655			Soil near thermal hot spring, São Miguel island, Azores, Portugal
<i>R. azoricum</i>	CBS 8949^T	AF321977	CBS Seq.	A1	A2		●		JN246599		Soil, São Miguel island, Azores, Portugal
<i>R. fluviale</i>	CBS 6568^T	AF189915	AY015432	Sf			●		JN246601		Brackish water, near mouth of Miami river, Florida, USA

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>S. microsporus</i>	CBS 7041^T			Sf			●		JN246602		Herbaceous culm, Jamaica
<i>S. ruineniae</i>	CBS 5004	AF387127	JN246558	A1	A2	○	○				Foliage of cacao tree (<i>Theobroma cacao</i>), Bogor, Indonesia
<i>S. ruineniae</i>	CBS 5078			As		○	○				Foliage of cacao tree (<i>Theobroma cacao</i>), Bogor, Indonesia
<i>S. ruineniae</i>	CBS 5811	AF070434	AB030339	As		○	○				Dung of goat, Pakistan
<i>S. ruineniae</i>	CBS 9111	AF387128	JN246557	A2	A1	●		JN246665			Garden soil, Taiwan
<i>Sp. odoratus</i>	CBS 9115	AF387125	CBS seq.	As		○	○				Basidiocarp of <i>Myxarium nucleatum</i> , Sesimbra, Portugal
<i>Sp. odoratus</i>	ZP 470	JN246540	JN246559	As		○	○				Culture contaminant, Caparica, Portugal
<i>Sp. poonsookiae</i>	CBS 9095^T	AF387124	AB030327	As		n.d.	n.d.				Dead leaf of <i>Mangifera indica</i> , Bangkok, Thailand
<i>Sp. nylandii</i>	CBS 9093^T	AF387123	AB030323	As		n.d.	n.d.				Dead leaf of <i>Oryza sativa</i> , Bangkok, Thailand
" <i>R. oreadum</i> "	ZP 292^T	JN246537	JN246560	A1		●		JN246666			Soil under snow, Serra da Estrela, Portugal
" <i>R. oreadum</i> "	ZP 295	JN246538	JN246561	A2		○	○				Soil under snow, Serra da Estrela, Portugal
<i>Rh. colostri</i>	A326			As			●		JN246605		Olo river, Portugal
<i>Rh. colostri</i>	C18B1			As			●				Fruiting body of <i>Cyttaria hariotii</i> , Patagonia, Argentina
<i>Rh. colostri</i>	C21C1	JN246536	JN246562	As		●		JN246667			Fruiting body of <i>Cyttaria hariotii</i> , Patagonia, Argentina
<i>Rh. colostri</i>	CBS 348^T	AY372177	JN246563	As			●		JN246603		Colostrum from woman
<i>Rh. colostri</i>	CBS 2201			As			●		JN246604		Unknown
<i>Rh. colostri</i>	CBS 9002			As		●		JN246668			Flowering plant of <i>Helleborus foetidus</i> , Marburg, Germany
<i>Rh. colostri</i>	ZP 970			As			●				Leaves of <i>Nothofagus moorei</i> , Lamington National Park, Australia
<i>Rh. colostri</i>	ZP 984			As			●				<i>Cyttaria gunnii</i> on <i>Nothofagus cunninghamii</i> , Mt. Field Park, Tasmania
<i>Rh. colostri</i>	ZP 985			As			●				<i>Cyttaria gunnii</i> on <i>Nothofagus menziesii</i> , Lake Daniels, New Zealand
<i>Rh. colostri</i>	ZP 986			As			●				<i>Cyttaria gunnii</i> on <i>Nothofagus menziesii</i> (floor), Hasst Pass, New Zealand
<i>R. lusitaniae</i>	CBS 7604^T	AF070423	AY015430	Sf			●		JN246606		Soil of woodland, Lisbon, Portugal
<i>R. lusitaniae</i>	PYCC 4599			Sf			●		JN246607		Dried leaf material, Arrábida Natural Park, Portugal
<i>R. lusitaniae</i>	PYCC 4642	JN246539	AB087497	Sf			●		JN246608		Dried leaf material, Arrábida Natural Park, Portugal
<i>Sp. ruberrimus</i>	CBS 7500^{AUT}	AF070442	AY070004	As			●		JN246609		Air, Fukuoka, Japan

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>Sp. ruberrimus</i>	CRUB 1041	JN246541	JN246564	As		●		JN246669			Aquatic environment, Patagonia, Argentina
<i>Sp. phaffii</i>	CBS 9129^T	AY070011	AY069995	As		n.d.	n.d.				Wilting leaf of <i>Nerium indicum</i> , Yunnan, China
<i>Sp. phaffii</i>	CH 2.049	AY070010	AY069994	As		n.d.	n.d.				Wilting leaf of <i>Ehretia corylifolia</i> , Yunnan, China
<i>Sporobolomyces sp.</i>	IAM 13481	JGI Genome	JGI Genome	n.d.		●		JGI Genome			Leaf of willow, Japan (identified as <i>Sporobolomyces roseus</i>)
<i>S. pararoseus</i>	CBS 484	AF070437	AF417115	A1	A2		●		JN246610		Air, USA
<i>S. pararoseus</i>	CBS 491^T	AF189977	AY015429	A2	A1	●		JN246670			Soil, Japan
<i>S. pararoseus</i>	CBS 499			A1	A2		●		JN246611		Air in dairy, USA
<i>S. pararoseus</i>	CBS 7716	EU003452	JN246565	A2	A1	●		JN246671			Soil, USSR
<i>Sp. patagonicus</i>	CBS 9657^T	AY158655	AY552328	As		n.d.	n.d.				Subsurface water, lake Fonck, Patagonia, Argentina
<i>Sp. patagonicus</i>	CBS 9658	AY158656	AY552329	As		n.d.	n.d.				Subsurface water, lake Hess, Patagonia, Argentina
<i>Sp. salmoneus</i>	CBS 488^T	AY070017	AY070005	As		n.d.	n.d.				Etiolated grass, under a wooden plank, Delft, The Netherlands
<i>Sp. salmoneus</i>	CBS 4217^T	AF070440	AY069993	As		n.d.	n.d.				Air, unknown location
<i>Sp. carnicolor</i>	CBS 4215^{AUT}	AY158641	AY069991	As		n.d.	n.d.				Unknown
<i>Sp. japonicus</i>	CBS 5744^T	AY070009	AY069992	As		n.d.	n.d.				Oil brine, Yabase oil field, Akita Prefecture, Japan
<i>Sp. bannaensis</i>	CBS 9204^T	AY274823	AY274824	As		n.d.	n.d.				Leaf of <i>Theobroma cacao</i> , Xishuang Banna, Yunnan, China
<i>Sp. beijingensis</i>	CBS 9730^T		AY364837	As		n.d.	n.d.				Wilting leaf of <i>Sorbus pohnuashanensis</i> , Baihua Mountain, Beijing, China
<i>S. longiusculus</i>	CBS 9654^T	AY158657	AY552327	A1	A2		●		JN246612		Subsurface water, Fonck lake, Patagonia, Argentina
<i>S. longiusculus</i>	CBS 9655	AY552326	JN246566	A2	A1	○					Subsurface water, Ilon lake, Patagonia, Argentina
<i>S. longiusculus</i>	CBS 9656			A2	A1	○					Subsurface water, Ilon lake, Patagonia, Argentina
<i>Sp. blumeae</i>	CBS 9094^T	AY070007	AB030331	As		●		JN246672			Dead leaf of <i>Blumea sp.</i> , Bangkok, Thailand
<i>S. metaroseus</i>	CBS 5541	EU003458	EU003480	Sf		●		JN246673			Flower of <i>Fumaria sp.</i> , France
<i>S. metaroseus</i>	CBS 7683^T	EU003461	EU003482	Sf		○	○				Leaves, Portugal
<i>Sp. jilinensis</i>	CBS 9728^T	AY364838		As		●		JN246674			Wilting leaf of <i>Pinus koraiensis</i> , Changbai Mountain, Jilin province, China
<i>S. johnsonii</i>	CBS 1522			As	As	●				GU474690	Fodder yeast, Germany
<i>S. johnsonii</i>	CBS 2630			A2	A1	●					Air, The Netherlands
<i>S. johnsonii</i>	CBS 2634	JN246542	JN246567	A1	A2		●		GU474647	GU474685	<i>Fragaria sp.</i> , Japan

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>S. johnsonii</i>	CBS 2643			A2	A1	●					Unknown substrate, Germany
<i>S. johnsonii</i>	CBS 4209			A2	A1	●					Fruit body of <i>Exidia</i> sp., Japan
<i>S. johnsonii</i>	CBS 5470^T	AF070435	AY015431	Sf		●	●	GU474645	GU474648	GU474692	Leaf of <i>Rubus idaeus</i> with dead pustule of <i>Phragmidium rubi-idaei</i> , USA
<i>S. johnsonii</i>	CBS 7795	EF592139	EF592112	As		●		HM133777			Culture contaminant, Russia
<i>S. johnsonii</i>	CBS 8241			Sf		●	●				Unknown
<i>S. johnsonii</i>	PYCC 4351			A2	A1	●		GU474644		GU474689	Leaf of a tree, Portugal
<i>S. salmonicolor</i>	CBS 483	EF592144	EF592118	A2	A1	●		GU474642		GU474673	Rusted leaf of <i>Citrus</i> sp., France
<i>S. salmonicolor</i>	CBS 487			A1	A2		●				Air, Japan
<i>S. salmonicolor</i>	CBS 490^T	AF070439	AY015434	A1	A2		●		GU474641	GU474656	Culture contaminant
<i>S. salmonicolor</i>	CBS 495			A1	A2		●				Culture contaminant, Japan
<i>S. salmonicolor</i>	CBS 496			A1	A2		●			GU474658	Scorched skin of orange, Delft, Netherlands
<i>S. salmonicolor</i>	CBS 497			A2	A1	●					Unknown
<i>S. salmonicolor</i>	CBS 1012			A1	A2		●		HM133782	GU474649	Leaf of <i>Aristolochia</i> sp., Botanic Laboratory, Delft, The Netherlands
<i>S. salmonicolor</i>	CBS 1013			A1	A2		●			GU474650	Air in dairy, USA
<i>S. salmonicolor</i>	CBS 1039			A1	A2		●			GU474651	Air in dairy, USA
<i>S. salmonicolor</i>	CBS 2635			A1	A2		●				Infected skin of a man, Germany
<i>S. salmonicolor</i>	CBS 2641			As			●				Air, Netherlands
<i>S. salmonicolor</i>	CBS 2647			A2	A1	●				GU474670	Gut of <i>Drosophila</i> sp., locality unknown
<i>S. salmonicolor</i>	CBS 2648			A2	A1	●					Exudate of <i>Kalopanax vicinifolium</i> var. <i>typicum</i> , Japan
<i>S. salmonicolor</i>	CBS 2873			A1	A2		●				Extract of oak bark, France
<i>S. salmonicolor</i>	CBS 4029			As			●				Soil, New Zealand
<i>S. salmonicolor</i>	CBS 4030			A1	A2		●				Soil, New Zealand
<i>S. salmonicolor</i>	CBS 4474			A2	A1	●		HM133770		GU474672	Blistered skin of a man, Bonn, Germany
<i>S. salmonicolor</i>	CBS 5937			A1	A2		●				Carious dentine, South Africa
<i>S. salmonicolor</i>	CBS 6322			A1	A2		●		HM133783	GU474660	Rotting wood shavings, Chile
<i>S. salmonicolor</i>	CBS 6470			A1	A2		●				Air, Germany
<i>S. salmonicolor</i>	CBS 6529			A2	A1	●					Culture contaminant, R.J. Bandoni
<i>S. salmonicolor</i>	CBS 6530			A1	A2		●				Bog, locality unknown

Species	Strains	D1/D2 LSU (GenBank)	ITS region (GenBank)	Mating behaviour		STE3 A1	STE3 A2	STE3.A1 (GenBank)	STE3.A2 (GenBank)	HD1/HD2 (GenBank)	Isolation source and location
				Old	New						
<i>S. salmonicolor</i>	CBS 6781			A1	A2		●				Bituminous soil, oil field, Cumanà, Venezuela
<i>S. salmonicolor</i>	CBS 6832			A1	A2		●		GU474646	GU474664	Cerebro-spinal fluid, India
<i>S. salmonicolor</i>	CBS 7260			A1	A2		●			GU474665	Slime flux of <i>Quercus pendunculata</i> , Russia
<i>S. salmonicolor</i>	IHMT 2446/96			A2	A1	●				GU474676	Skin lesion, Portugal
<i>S. salmonicolor</i>	ML 2241			A2	A1	●		GU474643		GU474678	Isolated by J. W. Fell
<i>S. salmonicolor</i>	NRRL Y-17498			A2	A1	●					Ice core, Greenland
<i>S. salmonicolor</i>	PYCC 4558			A2	A1	●		HM133774		GU474679	Polluted river water, Oeiras, Portugal
<i>S. salmonicolor</i>	PYCC 4623			A2	A1	●				GU474680	Soil, USSR
<i>S. salmonicolor</i>	PYCC 5245			A1	A2		●				Unknown substrate, Portugal
<i>S. salmonicolor</i>	RJB 948			A2	A1	●					Isolated by R. J. Bandoni
<i>S. salmonicolor</i>	RJB 950			A1	A2		●				Isolated by R. J. Bandoni
<i>S. salmonicolor</i>	RJB 8219			A1	A2		●				Isolated by R. J. Bandoni
<i>S. salmonicolor</i>	ZP 392			A1	A2		●				Fruit body of <i>Dacrymyces</i> sp., Germany
<i>S. salmonicolor</i>	ZP 648			A2	A1	●				GU474682	Leaf of <i>Ligustrum</i> sp., Monte de Caparica, Portugal