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Botryosphaeriaceae: Current status of genera and species

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Abstract

The *Botryosphaeriaceae* comprises endophytes, saprobes and plant pathogens. Recently, some taxa in *Botryosphaeriaceae* have undergone nomenclatural changes. This paper represents the first comprehensive overview of *Botryosphaeriaceae* since 2013. Twenty three genera and 187 species of *Botryosphaeriaceae* are listed alphabetically, brief notes for species in each genus are provided. Information is provided for the location of ex-type isolates, new host records and geographical distribution of species. Available DNA sequences from ex-type isolates are listed in a table and multilocus phylogenetic trees for major genera in *Botryosphaeriaceae* are provided.

Key words – Botryosphaeriales – phylogeny – systematics – taxonomy

Introduction

Theissen & Sydow (1918) introduced the *Botryosphaeriaceae* for three genera, namely, *Botryosphaeria*, *Phaeobotryon* and *Dibotryon*. Over the years the family and genera have undergone several taxonomic revisions and updates. Introduction of new genera, together with the addition of separate names for sexual and asexual genera resulted in at least 78 genera within this family. In addition, the type genus (*Botryosphaeria*) was subject to several changes that broadened the concept resulting in a diverse range of morphologies, especially in the asexual states, associated with a single sexual genus. Indeed the concept of the sexual state incorporated taxa with ascospores that could be hyaline or coloured, septate or aseptae. As a result, the genus *Botryosphaeria* and the family *Botryosphaeriaceae* became unmanageable and confused.

In a phylogentic approach based on the 28s rRNA gene Crous et al. (2006) revealed 10 lineages within *Botryophaeriaceae*. They considered these lineages to represent individual genera that could be recognised on the morphology of their sexual morphs. The existing anamorph genera names were used for most of the genera but new names were introduced for *Neofusicoccum* and *Pseudofusicoccum*. However, some of the clades could not be fully resolved, notably the one comprising *Diplodia/Lasiodiplodia/Tiarosporella*. Nevertheless, that study provided a stable base for future work on systematics of the family.

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Phillips et al. (2008) resolved the status of species with brown ascospores, introduced or re-instated a further five genera in *Botryosphaeriaceae* and clarified the status of *Diplodia* and *Lasiodiplodia*. Damm et al. (2007) showed that *Aplosporella* resides in *Botryosphaeriaceae*, Rojas et al. (2008) determined that *Endomelanconiopsis* also resides there and Phillips & Alves considered *Melanops* to be yet another genus. Liu et al. (2012) used a phylogenetic approach together with a study of herbarium specimens and introduced two further genera namely *Botryobambusa* and *Cophinforma* bringing the total number of genera known from culture to 21.

Wikee et al. (2013) re-instated *Phyllostictaceae* for *Phyllosticta*, Slippers et al. (2013) introduced *Saccharataceae* for *Saccharata*, *Aplosporellaceae* for *Aplosporella* and *Melanopsaceae* for *Melanops*. Phillips et al. (2013) provided comprehensive descriptions, notes and phylogenies for the 17 genera and 110 species known from culture that remained in the family. Since then 6 new genera and 85 new species/species combinations have been introduced (Table 1). In this paper we provide an updated list of all genera and species known from culture in the *Botryosphaeriaceae* together with relevant data on types and ex-type cultures. We also include updated information on hosts and known geographic distribution. Backbone trees for the larger genera (*Botryosphaeria*, *Diplodia*, *Dothiorella/Spencermartinsia*, *Lasiodiplodia* and *Neofusicoccum*) are included as well as an overview tree of the Botryosphaeriales showing the currently accepted limits of the *Botryosphaeriaceae*. In preparing this paper we included novel taxa and taxonomic changes published up to and including 31 October 2016 as well as those published in this issue of Mycosphere.

Materials and methods

The genera and species included in Phillips et al. (2013) was used as the starting point. Genera and species not included in that paper, or introduced since 2013 were found in searches of MycoBank and the mycological literature in general. All names were checked for validity, and for the existence of cultures and relevant sequences in GenBank before they were included in the current list. All genera and species known from culture are listed in Table 1. The USDA fungal database (Farr & Rossman 2016) was used to gather information on host association and geographic distribution. Additional new disease reports, distribution and hosts were retrieved from recent publications.

Phylogenetic analysis

Sequences of internal transcribed spacer (ITS), translation elongation factor (*tef1-α*) and 28S large subunit ribosomal gene (LSU) were download from NCBI GenBank (https://www.ncbi.nlm.nih.gov/genbank/). An overview backbone phylogenetic tree for the order Botryosphaeriales was constructed from ITS, *tef1-α* and LSU. Separate phylogenetic trees of the larger genera (*Botryosphaeria*, *Diplodia*, *Dothiorella/Spencermartinsia*, *Lasiodiplodia* and *Neofusicoccum*) were constructed from combined ITS and *tef1-α* sequences.

Single gene regions were aligned with Clustal X1.81 (Thompson et al. 1997) and combined with BioEdit v. 7.0.9.0 (Hall 1999). Further alignment of the sequences was done using default settings of MAFFT v. 7 (Katoh & Toh 2008; http://mafft.cbrc.jp/alignment/server/) and manually adjusted where necessary using BioEdit v. 7.0.9.0 (Hall 1999). Maximum Parsimony analysis (MP) was performed with PAUP (Phylogenetic Analysis Using Parsimony) v. 4.0b10 (Swofford 2002). Gaps were treated as missing data and ambiguously aligned regions were excluded. Trees were inferred using the heuristic search option with Tree Bisection Reconnection branch swapping and 1000 random sequence additions. Maxtrees was set at 1000, branches of zero length were collapsed and all multiple parsimonious trees were saved. Descriptive tree statistics for parsimony (tree length, consistency index, retention index, rescaled consistency index, and homoplasy index) were calculated for trees generated under different optimality criteria.

The best model of evolution for each gene region was determined using MRMODELTEST v. 2.2 (Nylander 2004) and maximum likelihood analyses were performed in RAXML GUI v. 0.9b2 (Silvestro & Michalak 2010). The RAXML analyses were run with a rapid bootstrap analysis

Table 1 GenBank accession numbers of genera and species in *Botryosphaeriaceae* and representative genera and species in order Botryosphaeriales. Type species are given in bold typeface. Isolates and sequence accession numbers of *Botryosphaeriaceae* genera and species introduced since Phillips et al. (2013) are italicized.

Species	Cultures	ITS	*tef1-α*	LSU
Botryosphaeriaceae				
Alanphillipsia aloeicola	***CBS 138896***	***KP004444***	***N/A***	***KP004472***
Alanphillipsia aloeigena	***CBS 136408***	***KF777137***	***N/A***	***KF777193***
Alanphillipsia aloes	***CBS 136410***	***KF777138***	***N/A***	***KF777194***
Alanphillipsia aloetica	***CBS 136409***	***KF777139***	***N/A***	***KF777195***
Alanphillipsia euphorbiae	***CBS 136411***	***KF777140***	***N/A***	***KF777196***
Barriopsis archontophoenicis	***MFLUCC 14-1164***	***KX235306***	***KX235305***	***KX235307***
Barriopsis fusca	**CBS 174.26**	**EU673330**	**EU673296**	**DQ377857**
Barriopsis iraniana	**IRAN 1448C**	**FJ919663**	**FJ919652**	**KF766318**
Barriopsis iraniana	IRAN1449C	FJ919665	FJ919654	N/A
Barriopsis tectonae	***MFLUCC 12-0381***	***KJ556515***	***KJ556516***	***N/A***
Botryobambusa fusicoccum	**MFLUCC 11-0143**	**JX646792**	**JX646857**	**JX646809**
Botryobambusa fusicoccum	MFLUCC 11-0657	JX646793	JX646858	JX646810
Botryosphaeria agaves	**MFLUCC 11-0125**	**JX646791**	**JX646856**	**JX646808**
Botryosphaeria agaves	MFLUCC 10-0051	JX646790	JX646855	JX646807
Botryosphaeria auasmontanum	***CMW 25413***	***KF766167***	***EU101348***	***KF766332***
Botryosphaeria corticis	**CBS 119047**	**DQ299245**	**EU017539**	**EU673244**
Botryosphaeria corticis	ATCC 22927	DQ299247	EU673291	EU673245
Botryosphaeria dothidea	**CBS 115476**	**AY236949**	**AY236898**	**DQ377852**
Botryosphaeria dothidea	CBS 110302	AY259092	AY573218	EU673243
Botryosphaeria fabicerciana	**CBS 127193**	**HQ332197**	**HQ332213**	**N/A**
Botryosphaeria fabicerciana	CMW 27108	HQ332200	HQ332216	N/A
Botryosphaeria fusispora	**MFLUCC 10-0098**	**JX646789**	**JX646854**	**JX646806**
Botryosphaeria fusispora	MFLUCC 11-0507	JX646788	JX646853	JX646805
Botryosphaeria minutispermatia	***GZCC 16-0013***	***KX447675***	***KX447678***	***N/A***
Botryosphaeria minutispermatia	*GZCC 16-0014*	*KX447676*	*KX447679*	*N/A*
Botryosphaeria ramosa	**CBS 122069**	**EU144055**	**EU144070**	**N/A**
Botryosphaeria scharifii	**CBS 124703**	**JQ772020**	**JQ772057**	**N/A**
Botryosphaeria scharifii	CBS 124702	JQ772019	JQ772056	N/A
Botryosphaeria sinensia	***CGMCC 3.17722***	***KT343254***	***KU221233***	***N/A***
Botryosphaeria sinensia	*CGMCC 3.17724*	*KT343256*	*KU221234*	*N/A*
Cophinforma atrovirens	**MFLUCC 11-0425**	**JX646800**	**JX646865**	**JX646817**
Cophinforma atrovirens	MFLUCC 11-0655	JX646801	JX646866	JX646818
Cophinforma mamane	**CBS 117444**	**KF531822**	**KF531801**	**DQ377855**
Diplodia africana	**CBS 120835**	**EF445343**	**EF445382**	**N/A**
Diplodia africana	CBS 121104	EF445344	EF445383	N/A
Diplodia agrifolia	**CBS 132777**	**JN693507**	**JQ517317**	**N/A**
Diplodia agrifolia	UCROK1429	JQ411412	JQ512121	N/A
Diplodia alatafructa	**CBS 124931**	**FJ888460**	**FJ888444**	**N/A**
Diplodia alatafructa	CBS 124933	FJ888478	FJ888446	N/A
Diplodia allocellula	**CBS 130408**	**JQ239397**	**JQ239384**	**JQ239410**
Diplodia allocellula	CBS 130410	JQ239399	JQ239386	JQ239412
Diplodia bulgarica	**CBS 124254**	**GQ923853**	**GQ923821**	**N/A**
Diplodia bulgarica	CBS 124135	GQ923852	GQ923820	N/A
Diplodia corticola	**CBS 112549**	**AY259100**	**AY573227**	**AY928051**
Diplodia corticola	CBS 112546	AY259110	DQ458872	EU673262
Diplodia crataegicola	***MFLU 15-1311***	***KT290244***	***KT290248***	***N/A***
Diplodia cupressi	**CBS 168.87**	**DQ458893**	**DQ458878**	**EU673263**

Species	Cultures	ITS	*tef1-α*	LSU
Diplodia cupressi	CBS 261.85	DQ458894	DQ458879	EU673264
Diplodia estuarina	***CMW41231***	***KP860831***	***KP860676***	***N/A***
Diplodia estuarina	*CMW41230*	*KP860830*	*KP860675*	*N/A*
Diplodia fraxinii	***CBS 136010***	***KF307700***	***KF318747***	***N/A***
Diplodia galiicola	***MFLU 15-1310***	***KT290245***	***KT290249***	***N/A***
Diplodia insularis	***CBS 140350***	***KX833072***	***KX833073***	***N/A***
Diplodia intermedia	**CBS 124462**	**GQ923858**	**GQ923826**	**N/A**
Diplodia intermedia	CBS 124134	HM036528	GQ923851	N/A
Diplodia malorum	**CBS 124130**	**GQ923865**	**GQ923833**	**N/A**
Diplodia malorum	CBS 112554	AY259095	DQ458870	N/A
Diplodia mutila	**CBS 112553**	**AY259093**	**AY573219**	**AY928049**
Diplodia mutila	CBS 230.30	DQ458886	DQ458869	AY928049
Diplodia neojuniperi	***CPC 22753***	***KM006431***	***KM006462***	***N/A***
Diplodia olivarum	**CBS 121887**	**EU392302**	**EU392279**	**N/A**
Diplodia olivarum	CBS 121886	EU392297	EU392274	N/A
Diplodia pseudoseriata	**CBS 124906**	**EU080927**	**EU863181**	**N/A**
Diplodia pseudoseriata	CBS 124907	EU080922	EU863179	N/A
Diplodia quercivora	**CBS 133852**	**JX894205**	**JX894229**	**N/A**
Diplodia rosacearum	***CBS 141915***	***KT956270***	***KU378605***	***N/A***
Diplodia rosulata	**CBS 116470**	**EU430265**	**EU430267**	**DQ377896**
Diplodia rosulata	CBS 116472	EU430266	EU430268	DQ377897
Diplodia sapinea	**CBS 393.84**	**DQ458895**	**DQ458880**	**DQ377893**
Diplodia sapinea	CBS 109725	DQ458896	DQ458881	EU673270
Diplodia scrobiculata	**CBS 118110**	**AY253292**	**AY624253**	**N/A**
Diplodia scrobiculata	CBS 109944	DQ458899	DQ458884	EU673268
Diplodia scrobiculata	CBS 113423	DQ458900	DQ458885	EU673267
Diplodia seriata	**CBS 112555**	**AY259094**	**AY573220**	**AY928050**
Diplodia seriata	CBS 119049	DQ458889	DQ458874	EU673266
Diplodia subglobosa	***CBS 124133***	***GQ923856***	***GQ923824***	***N/A***
Diplodia tsugae	**CBS 418.64**	**DQ458888**	**DQ458873**	**DQ377867**
Dothiorella acacicola	***CBS 141295***	***KX228269***	***KX228376***	***KX228320***
Dothiorella americana	**CBS 128309**	**HQ288218**	**HQ288262**	**N/A**
Dothiorella americana	CBS 128310	HQ288219	HQ288263	N/A
Dothiorella brevicollis	**CBS 130411**	**JQ239403**	**JQ239390**	**JQ239416**
Dothiorella californica	***CBS 141587***	***KX357188***	***KX357211***	***N/A***
Dothiorella capri-amissi	***CMW 25403***	***EU101323***	***EU101368***	***N/A***
Dothiorella capri-amissi	*CMW 25404*	*EU101324*	*EU101369*	*N/A*
Dothiorella casuarini	**CBS 120688**	**DQ846773**	**DQ875331**	**N/A**
Dothiorella casuarini	CBS 120690	DQ846774	DQ875333	N/A
Dothiorella dulcispinae	**CBS 130413**	**JQ239400**	**JQ239387**	**JQ239413**
Dothiorella iberica	**CBS 115041**	**AY573202**	**AY573222**	**AY928053**
Dothiorella iberica	CBS 113188	AY573198	EU673278	EU673230
Dothiorella iranica	***IRAN1587C***	***KC898231***	***KC898214***	***N/A***
Dothiorella longicollis	**CBS 122068**	**EU144054**	**EU144069**	**N/A**
Dothiorella longicollis	CBS 122066	EU144052	EU144067	N/A
Dothiorella moneti	**MUCC505**	**EF591920**	**EF591971**	**EF591937**
Dothiorella moneti	MUCC 507	EF591922	EF591973	EF591939
Dothiorella neclivorem	***DAR80992***	***KJ573643***	***KJ573640***	***N/A***
Dothiorella oblonga	***CMW 25407***	***EU101300***	***EU101345***	***N/A***
Dothiorella omnivora	***CBS 140349***	***KP205497***	***KP205470***	***N/A***
Dothiorella omnivora	*CBS 188.87*	*EU673316*	*EU673283*	*N/A*
Dothiorella parva	***IRAN1579C***	***KC898234***	***KC898217***	***N/A***
Dothiorella parva	*IRAN1585C*	*KC898235*	*KC898218*	*N/A*

Species	Cultures	ITS	*tef1-α*	LSU
Dothiorella pretoriensis	**CBS 130404**	**JQ239405**	**JQ239392**	**JQ239418**
Dothiorella pretoriensis	CBS 130403	JQ239406	JQ239393	JQ239419
Dothiorella prunicola	***CBS 124723***	***EU673313***	***EU673280***	***EU673232***
Dothiorella rhamni	***MFLUCC 14-0902***	***KU246381***	***N/A***	***KU246382***
Dothiorella santali	**MUCC 509**	**EF591924**	**EF591975**	**EF591941**
Dothiorella santali	MUCC 508	EF591923	EF591974	EF591940
Dothiorella sarmentorum	**IMI 63581b**	**AY573212**	**AY573235**	**AY928052**
Dothiorella sarmentorum	CBS 115038	AY573206	AY573223	DQ377860
Dothiorella sempervirentis	***IRAN1583C***	***KC898236***	***KC898219***	***N/A***
Dothiorella sempervirentis	*IRAN1581C*	*KC898237*	*KC898220*	*N/A*
Dothiorella striata	***ICMP16824***	***EU673320***	***EU673287***	***EU673240***
Dothiorella striata	*ICMP16819*	*EU673320*	*EU673287*	*EU673239*
Dothiorella symphoricarposicola	***MFULCC 13-0497***	***KJ742378***	***KJ742381***	***N/A***
Dothiorella symphoricarposicola	*MFLUCC 13-0196*	*KU234782*	*KU234796*	*N/A*
Dothiorella tectonae	***MFLUCC12-0382***	***KM396899***	***KM409637***	***N/A***
Dothiorella thailandica	**CBS 133991**	**JX646796**	**JX646861**	**JX646813**
Dothiorella thripsita	**BRIP 51876**	**FJ824738**	**KJ573639**	***N/A***
Dothiorella ulmacea	***CBS 138855***	***KR611881***	***KR611910***	***KR611899***
Dothiorella uruguayensis	**CBS 124908**	**EU080923**	**EU863180**	***N/A***
Dothiorella vidmadera	***DAR78992***	***EU768874***	***EU768881***	***N/A***
Dothiorella vidmadera	*DAR78993*	*EU768876*	*EU768882*	*N/A*
Dothiorella vinea-gemmae	***DAR81012***	***KJ573644***	***KJ573641***	***N/A***
Endomelanconiopsis endophytica	**CBS 120397**	**EU683656**	**EU683637**	**EU683629**
Endomelanconiopsis endophytica	CBS 122550	EU683664	EU683645	EU683634
Endomelanconiopsis microspora	**CBS 353.97**	**EU683655**	**EU683636**	**EU683628**
Eutiarosporella africana	***CBS 133854***	***KC769956***	***KC769852***	***KC769990***
Eutiarosporella africana	*CBS 135850*	*KC769957*	*KC769853*	*KC769991*
Eutiarosporella dactylidis	***MFLUCC 13-0276***	***KM978944***	***KP031694***	***KM978949***
Eutiarosporella dactylidis	*MFLUCC 15-0915*	*KU246378*	*N/A*	*KU246380*
Eutiarosporella darliae	***DAR 82491***	***KP309793***	***KP309805***	***N/A***
Eutiarosporella darliae	*DAR 82493*	*KP309786*	*KP309807*	*N/A*
Eutiarosporella pseudodarliae	***DAR 82489***	***KP309796***	***KP309797***	***N/A***
Eutiarosporella pseudodarliae	*DAR 82490*	*KP309794*	*KP309800*	*N/A*
Eutiarosporella tritici	***CBS 118719***	***KC769961***	***KF531809***	***DQ377941***
Eutiarosporella tritici-australis	***DAR 82485***	***KP309788***	***KP309799***	***N/A***
Eutiarosporella tritici-australis	*DAR 82486*	*KP309787*	*KP309804*	*N/A*
Eutiarosporella urbis-rosarum	***CBS 130405***	***JQ239407***	***JQ239394***	***JQ239420***
Eutiarosporella urbis-rosarum	*CBS 130406*	*JQ239408*	*JQ239395*	*JQ239421*
Lasiodiplodia avicenniae	***CMW41467***	***KP860835***	***KP860680***	***N/A***
Lasiodiplodia avicenniae	*LAS199*	*KU587957*	*KU587946*	*N/A*
Lasiodiplodia brasiliense	***CMM 4015***	***JX464063***	***JX464049***	***N/A***
Lasiodiplodia brasiliense	*CMM 2185*	*KC484800*	*KC481530*	*N/A*
Lasiodiplodia bruguierae	***CMW41470***	***KP860832***	***KP860677***	***N/A***
Lasiodiplodia bruguierae	*CMW41614*	*KP860833*	*KP860678*	*N/A*
Lasiodiplodia caatinguensis	***CMM1325***	***KT154760***	***KT008006***	***N/A***
Lasiodiplodia caatinguensis	*IBL352*	*KT154759*	*KT154753*	*N/A*
Lasiodiplodia citricola	**CBS 124707**	**GU945354**	**GU945340**	**N/A**
Lasiodiplodia citricola	CBS 124706	GU945353	GU945339	N/A
Lasiodiplodia crassispora	**CBS 118741**	**DQ103550**	**EU673303**	**DQ377901**
Lasiodiplodia crassispora	WAC 12534	DQ103551	DQ103558	N/A
Lasiodiplodia crassispora	CBS 110492	EF622086	EF622066	N/A
Lasiodiplodia euphorbicola	***CMM3609***	***KF234543***	***KF226689***	***N/A***
Lasiodiplodia euphorbicola	*IBL329*	*KT247490*	*KT247492*	N/A

Species	Cultures	ITS	*tef1-α*	LSU
Lasiodiplodia exigua	***CBS 137785***	***KJ638317***	***KJ638336***	***N/A***
Lasiodiplodia exigua	*BL184*	*KJ638318*	*KJ638337*	*N/A*
Lasiodiplodia gilanensis	**CBS 124704**	**GU945351**	**GU945342**	***N/A***
Lasiodiplodia gilanensis	CBS 124705	GU945352	GU945341	N/A
Lasiodiplodia gonubiensis	**CBS 115812**	**AY639595**	**DQ103566**	**N/A**
Lasiodiplodia gonubiensis	CBS 116355	AY639594	DQ103567	N/A
Lasiodiplodia gravistriata	***CMM 4564***	***KT250949***	***KT250950***	***N/A***
Lasiodiplodia gravistriata	*CMM 4565*	*KT250947*	*KT266812*	*N/A*
Lasiodiplodia hormozganensis	**CBS 124709**	**GU945355**	**GU945343**	***N/A***
Lasiodiplodia hormozganensis	CBS 124708	GU945356	GU945344	*N/A*
Lasiodiplodia iraniensis	**CBS 124710**	**GU945346**	**GU945334**	***N/A***
Lasiodiplodia iraniensis	CBS 124711	GU945347	GU945335	*N/A*
Lasiodiplodia laeliocattleyae	***CBS 167.28***	***KU507487***	***KU507454***	***N/A***
Lasiodiplodia lignicola	**CBS 134112**	**JX646797**	**KU887003**	**N/A**
Lasiodiplodia macrospora	***CMM3833***	***KF234557***	***KF226718***	***N/A***
Lasiodiplodia mahajangana	**CBS 124927**	**FJ900597**	**FJ900643**	**N/A**
Lasiodiplodia mahajangana	CBS 124925	FJ900595	FJ900641	*N/A*
Lasiodiplodia margaritacea	CBS 122519	EU144050	EU144065	N/A
Lasiodiplodia margaritacea	CBS 122065	EU144051	EU144066	N/A
Lasiodiplodia mediterranea	***CBS 137783***	***KJ638312***	***KJ638331***	***N/A***
Lasiodiplodia mediterranea	*ALG36*	*KJ638314*	*KJ638333*	*N/A*
Lasiodiplodia missouriana	**CBS 128311**	**HQ288225**	**HQ288267**	**N/A**
Lasiodiplodia missouriana	CBS 128312	HQ288226	HQ288268	N/A
Lasiodiplodia parva	**CBS 456.78**	**EF622083**	**EF622063**	**KF766362**
Lasiodiplodia parva	CBS 494.78	EF622084	EF622064	N/A
Lasiodiplodia plurivora	**CBS 120832**	**EF445362**	**EF445395**	***N/A***
Lasiodiplodia plurivora	CBS 121103	AY343482	EF445396	N/A
Lasiodiplodia pontae	***CMM1277***	***KT151794***	***KT151791***	***N/A***
Lasiodiplodia pseudotheobromae	CBS 116459	EF622077	EF622057	N/A
Lasiodiplodia pseudotheobromae	**CBS 447.62**	**EF622081**	**EF622060**	**N/A**
Lasiodiplodia pyriformis	***CMW 25414***	***EU101307***	***EU101352***	***N/A***
Lasiodiplodia pyriformis	*CMW 25415*	*EU101308*	*EU101353*	*N/A*
Lasiodiplodia rubropurpurea	**CBS 118740**	**DQ103553**	**EU673304**	**N/A**
Lasiodiplodia rubropurpurea	WAC 12536	DQ103554	DQ103572	N/A
Lasiodiplodia subglobosa	***CMM3872***	***KF234558***	***KF226721***	***N/A***
Lasiodiplodia subglobosa	*CMM 4046*	*KF234560*	*KF226723*	*N/A*
Lasiodiplodia thailandica	***CPC 22795***	***KJ193637***	***KJ193681***	***N/A***
Lasiodiplodia theobromae	**CBS 164.96**	**AY640255**	**AY640258**	**EU673253**
Lasiodiplodia theobromae	CBS124.13	DQ458890	DQ458875	N/A
Lasiodiplodia theobromae	CBS 111530	EF622074	EF622054	N/A
Lasiodiplodia theobromae	CAA 006	DQ458891	DQ458876	N/A
Lasiodiplodia venezuelensis	**CBS 118739**	**DQ103547**	**EU673305**	**N/A**
Lasiodiplodia venezuelensis	WAC 12540	DQ103548	DQ103569	N/A
Lasiodiplodia viticola	**CBS 128313**	**HQ288227**	**HQ288269**	**N/A**
Lasiodiplodia viticola	CBS 128315	HQ288228	HQ288270	N/A
Macrophomina phaseolina	**CBS 227.33**	**KF951627**	**KF952000**	**DQ377906**
Macrophomina phaseolina	CBS 162.25	KF531826	KF951996	DQ377905
Marasasiomyces karoo	***CBS 118718***	***KF531828***	***KF531807***	***DQ377939***
Mucoharknessia cortaderiae	***CPC 19974***	***KM108374***	***N/A***	***KM108401***
Mucoharknessia cortaderiae	*CPC 22208*	*KM108375*	*N/A*	*KM108402*
Mucoharknessia anthoxanthii	***MFLUCC 15-0904***	***KU246377***	***N/A***	***KU246379***
Neodeightonia licuriensis	***COAD1780***	***KP165429***	***KP165430***	***N/A***
Neodeightonia palmicola	**MFLUCC 10-0822**	**HQ199221**	**N/A**	**HQ199222**

Species	Cultures	ITS	*tef1-α*	LSU
Neodeightonia palmicola	MFLUCC 10-0823	HQ199224	N/A	HQ199225
Neodeightonia phoenicum	**CBS 122528**	**EU673340**	**EU673309**	**EU673261**
Neodeightonia phoenicum	CBS 169.34	EU673338	EU673307	EU673259
Neodeightonia rattanica	***MFLUCC 15-0712***	***KX646357***	***KX646360***	***KX646352***
Neodeightonia rattanica	*MFLUCC 15-0313*	*KX646358*	*KX646361*	*KX646353*
Neodeightonia rattanicola	***MFLUCC 15-0319***	***KX646359***	***KX646362***	***KX646354***
Neodeightonia subglobosa	**CBS 448.91**	**EU673337**	**EU673306**	**DQ377866**
Neodeightonia subglobosa	MFLUCC 11-0163	JX646794	JX646859	JX646811
Neofusicoccum algeriense	***CBS 137504***	***KJ657702***	***KJ657715***	***N/A***
Neofusicoccum algeriense	*ALG9*	*KJ657704*	*KJ657721*	*N/A*
Neofusicoccum andinum	**CBS 117453**	**AY693976**	**AY693977**	***N/A***
Neofusicoccum andinum	CBS 117452	DQ306263	DQ306264	*N/A*
Neofusicoccum arbuti	**CBS 116131**	**AY819720**	**N/A**	**N/A**
Neofusicoccum arbuti	CBS 117090	AY819724	KF531791	N/A
Neofusicoccum australe	**CMW 6837**	**AY339262**	**AY339270**	**KF766367**
Neofusicoccum australe	CMW 6853	AY339263	AY339271	N/A
Neofusicoccum batangarum	**CBS 124924**	**FJ900607**	**FJ900653**	**N/A**
Neofusicoccum batangarum	CBS 124923	FJ900608	FJ900654	N/A
Neofusicoccum braziliense	***CMM1338***	***JX513630***	***JX513610***	***N/A***
Neofusicoccum cordaticola	**CBS 123634**	**EU821898**	**EU821868**	***N/A***
Neofusicoccum cordaticola	CBS 123635	EU821903	EU821873	N/A
Neofusicoccum cryptoaustrale	***CMW23785***	***FJ752742***	***FJ752713***	***N/A***
Neofusicoccum eucalypticola	CBS 115679	AY615141	AY615133	N/A
Neofusicoccum eucalypticola	**CBS 115766**	**AY615143**	**AY615135**	**N/A**
Neofusicoccum eucalyptorum	**CBS 115791**	**AF283686**	**AY236891**	**N/A**
Neofusicoccum eucalyptorum	CMW 10126	AF283687	AY236892	N/A
Neofusicoccum grevilleae	**CBS 129518**	**JF951137**	**N/A**	**N/A**
Neofusicoccum hellenicum	***CERC1947***	***KP217053***	***KP217061***	***N/A***
Neofusicoccum kwambonambiense	**CBS 123639**	**EU821900**	**EU821870**	**N/A**
Neofusicoccum kwambonambiense	CBS 123641	EU821919	EU821889	N/A
Neofusicoccum lumnitzerae	***CMW41469***	***KP860881***	***KP860724***	***N/A***
Neofusicoccum lumnitzerae	*CMW41228*	*KP860882*	*KP860725*	*N/A*
Neofusicoccum luteum	**CBS 110299**	**AY259091**	**AY573217**	**AY928043**
Neofusicoccum luteum	CBS 110497	EU673311	EU673277	N/A
Neofusicoccum macroclavatum	**CBS 118223**	**DQ093196**	**DQ093217**	**N/A**
Neofusicoccum macroclavatum	WAC 12446	DQ093197	DQ093218	N/A
Neofusicoccum mangiferae	**CBS 118531**	**AY615185**	**DQ093221**	**N/A**
Neofusicoccum mangiferae	CBS 118532	AY615186	DQ093220	N/A
Neofusicoccum mangroviorum	***CMW41365***	***KP860859***	***KP860702***	***N/A***
Neofusicoccum mangroviorum	*CMW42481*	*KP860848*	*KP860692*	*N/A*
Neofusicoccum mediterraneum	**CBS 121718**	**GU251176**	**GU251308**	**N/A**
Neofusicoccum mediterraneum	CBS 121558	GU799463	GU799462	N/A
Neofusicoccum nonquaesitum	**CBS 126655**	**GU251163**	**GU251295**	**N/A**
Neofusicoccum nonquaesitum	PD 301	GU251164	GU251296	N/A
Neofusicoccum occulatum	**CBS 128008**	**EU301030**	**EU339509**	**N/A**
Neofusicoccum occulatum	MUCC 286	EU736947	EU339511	N/A
Neofusicoccum parvum	**CMW 9081**	**AY236943**	**AY236888**	**AY928045**
Neofusicoccum parvum	CBS 110301	AY259098	AY573221	N/A
Neofusicoccum pennatisporum	**MUCC 510**	**EF591925**	**EF591976**	**N/A**
Neofusicoccum protearum	**STE-U 4361**	**AF196295**	**N/A**	**N/A**
Neofusicoccum protearum	STE-U 1775	AF452539	N/A	N/A
Neofusicoccum ribis	**CBS 115475**	**AY236935**	**AY236877**	**N/A**
Neofusicoccum ribis	CBS 121.26	AF241177	AY236879	N/A

Species	Cultures	ITS	*tef1-α*	LSU
Neofusicoccum umdonicola	**CBS 123645**	**EU821904**	**EU821874**	**N/A**
Neofusicoccum umdonicola	CBS 123646	EU821905	EU821875	N/A
Neofusicoccum ursorum	***CMW 24480***	***FJ752746***	***FJ752709***	***N/A***
Neofusicoccum viticlavatum	**CBS 112878**	**AY343381**	**AY343342**	**N/A**
Neofusicoccum viticlavatum	CBS 112977	AY343380	AY343341	N/A
Neofusicoccum vitifusiforme	**CBS 110887**	**AY343383**	**AY343343**	**N/A**
Neofusicoccum vitifusiforme	CBS 110880	AY343382	AY343344	N/A
Neoscytalidium dimidiatum	***CBS 145.78***	***KF531816***	***KF531795***	***DQ377922***
Neoscytalidium dimidiatum	CBS 499.66	KF531820	KF531798	DQ377925
Neoscytalidium dimidiatum	**CBS 251.49**	**KF531819**	**KF531797**	**DQ377923**
Neoscytalidium dimidiatum	UTHSCSA DI 14-340	KM357894	N/A	KM357895
Neoscytalidium dimidiatum	IP127881	AY819727	N/A	DQ377925
Neoscytalidium dimidiatum	CBS 135275	KF571862	N/A	N/A
Neoscytalidium novaehollandiae	**CBS 122071**	**EF585540**	**EF585580**	**KF766374**
Neoscytalidium novaehollandiae	CBS 122610	EF585536	EF585578	N/A
Neoscytalidium orchidacearum	***MFLUCC 12-0533***	***KU179865***	***N/A***	***KU179864***
Phaeobotryon cupressi	**CBS 124700**	**FJ919672**	**FJ919661**	**N/A**
Phaeobotryon cupressi	IRAN 1458C	FJ919671	FJ919660	N/A
Phaeobotryon mamane	**CBS 122980**	**EU673332**	**EU673298**	**EU673248**
Phaeobotryon mamane	CPC 12442	EU673333	EU673299	DQ377899
Phaeobotryon negundinis	***MFLUCC 15-0436***	***KU820970***	***KU853997***	***KU820971***
Phaeobotryon negundinis	*CAA 797*	*KX061513*	*KX061507*	*N/A*
Phaeobotryon rhois	***CFCC 89662***	***KM030584***	***KM030598***	***KM030591***
Phaeobotryon rhois	*CFCC 89663*	*KM030585*	*KM030599*	*KM030592*
Pseudofusicoccum adansoniae	**CBS 122055**	**EF585523**	**EF585571**	**N/A**
Pseudofusicoccum adansoniae	WAC 12689	EF585534	EF585567	EF585554
Pseudofusicoccum ardesiacum	**CBS 122062**	**EU144060**	**EU144075**	**N/A**
Pseudofusicoccum ardesiacum	WAC 13294	GU172405	GU172437	N/A
Pseudofusicoccum artocarpi	**CPC 22796**	**KM006452**	**KM006483**	**N/A**
Pseudofusicoccum kimberleyensis	**CBS 122058**	**EU144057**	**EU144072**	**N/A**
Pseudofusicoccum kimberleyensis	CBS 122059	EU144056	EU144071	N/A
Pseudofusicoccum olivaceum	**CBS 124939**	**FJ888459**	**FJ888437**	**N/A**
Pseudofusicoccum olivaceum	CBS 124940	FJ888462	FJ888438	N/A
Pseudofusicoccum stromaticum	**CBS 117448**	**AY693974**	**AY693975**	**DQ377931**
Pseudofusicoccum stromaticum	CBS 117449	DQ436935	DQ436936	DQ377932
Pseudofusicoccum violaceum	**CBS 124936**	**FJ888474**	**FJ888442**	**N/A**
Pseudofusicoccum violaceum	CBS 124937	FJ888458	FJ888440	N/A
Sakireeta madreeya	***CBS 532.76***	***KC769960***	***KM108427***	***DQ377940***
Sardiniella urbana	***CBS 141580***	***KX379674***	***KX379675***	***KX379676***
Sardiniella urbana	*BL180*	*KX379677*	*KX379678*	*KX379679*
Sardiniella urbana	*BL181*	*KX379680*	*KX379681*	*KX379682*
Spencermartinsia alpina	***CGMCC 3.18001***	***KX499645***	***KX499651***	***N/A***
Spencermartinsia citricola	***ICMP16828***	***EU673323***	***EU673290***	***N/A***
Spencermartinsia citricola	*CMP16827*	*EU673322*	*EU673289*	*N/A*
Spencermartinsia mangiferae	***IRAN1584C***	***KC898221***	***KC898204***	***N/A***
Spencermartinsia mangiferae	*IRAN1545C*	*KC898223*	*KC898206*	*N/A*
Spencermartinsia plurivora	***IRAN1557C***	***KC898225***	***KC898208***	***N/A***
Spencermartinsia plurivora	*IRAN1537C*	*KC898226*	*KC898209*	*N/A*
Spencermartinsia rosulata	***CBS 121760***	***EU101290***	***EU101335***	***N/A***
Spencermartinsia rosulata	*CMW 25392*	*EU101293*	*EU101338*	*N/A*
Spencermartinsia viticola	**CBS 117009**	**AY905554**	**AY905559**	**DQ377873**
Spencermartinsia westrale	***DAR80529***	***HM009376***	***HM800511***	***N/A***
Spencermartinsia westrale	*DAR80530*	*HM009377*	*HM800512*	*N/A*
Spencermartinsia yunnana	***CGMCC 3.17999***	***KX499643***	***KX499649***	***N/A***

Species	Cultures	ITS	*tef1-α*	LSU
Spencermartinsia yunnana	***CGMCC 3.18000***	***KX499644***	***KX499650***	***N/A***
Sphaeropsis citrigena	**ICMP 16812**	**EU673328**	**EU673294**	**EU673246**
Sphaeropsis citrigena	ICMP 16818	EU673329	EU673295	EU673247
Sphaeropsis eucalypticola	**CBS 133993**	**JX646802**	**JX646867**	**JX646819**
Sphaeropsis eucalypticola	MFLUCC 11-0654	JX646803	JX646868	JX646820
Sphaeropsis porosa	**CBS 110496**	**AY343379**	**AY343340**	**DQ377894**
Sphaeropsis porosa	CBS 110574	AY343378	AY343339	DQ377895
Sphaeropsis variabilis	***CMW 25420***	***EU101313***	***EU101358***	***N/A***
Sphaeropsis variabilis	*CMW 25421*	*EU101314*	*EU101359*	*N/A*
Sphaeropsis visci	**CBS 122526**	**EU673324**	**EU673292**	**N/A**
Sphaeropsis visci	CBS 186.97	EU673325	EU673293	DQ377868
Tiarosporella paludosa	***CPC 22701***	***KM108378***	***N/A***	***KM108404***
Tiarosporella paludosa	*CPC 22702*	*KM108379*	*N/A*	*KM108405*
Aplosporellaceae				
Aplosporella javeedii	**CMW 38166**	**KC769939**	**KC769847**	**KC769980**
Aplosporella prunicola	**CBS 121167**	**KF766147**	**N/A**	**JX681071**
Aplosporella yalgorensis	**MUCC 511**	**EF591927**	**EF591978**	**EF591944**
Bagnisiella examinans	**CBS 551.66**	**KF766148**	**GU349056**	**KF766316**
Melanopsaceae				
Melanops sp.	**CBS 118.39**	**FJ824771**	**FJ824776**	**DQ377856**
Melanops tulasnei	**CBS 116805**	**FJ824769**	**FJ824774**	**FJ824764**
Phyllostictaceae				
Phyllosticta citricarpa	**CBS 102374**	**FJ824767**	**FJ538376**	**DQ377877**
Phyllosticta minima	**CBS 111635**	**KF766215**	**KF766433**	**EU754194**
Phyllosticta parthenocissi	**CBS 111645**	**FJ824766**	**EU683653**	**DQ377876**
Phyllosticta philoprina	**CBS 616.72**	**KF766171**	**KF766402**	**KF766341**
Phyllosticta podocarpi	**CBS 111647**	**KF766217**	**KF766434**	**KF766383**
Planistromellaceae				
Kellermania crassispora	**CBS 131714**	**KF766175**	**KF766406**	**KF766345**
Kellermania dasylirionis	**CBS 131715**	**KF766177**	**KF766408**	**KF766347**
Kellermania macrospora	**CBS 131716**	**KF766178**	**KF766409**	**KF766348**
Kellermania nolinae	**CBS 131717**	**KF766180**	**KF766411**	**KF766350**
Kellermania plurilocularis	**CBS 131719**	**KF766181**	**KF766412**	**KF766351**
Kellermania yuccifoliorum	**CBS 131726**	**KF766185**	**KF766416**	**KF766355**
Saccharataceae				
Saccharata capensis	**CBS 122693**	**KF766224**	**EU552095**	**KF766390**
Saccharata kirstenboschensis	**CBS 123537**	**KF766225**	**N/A**	**FJ372409**
Saccharata proteae	**CBS 115206**	**KF766226**	**KF766438**	**DQ377882**
Septorioidaceae				
Septorioides pini-thunbergii	**CBS 473.91**	**KF251243**	**N/A**	**KF251746**
Septorioides strobi	**CBS141443**	**KT884699**	**KT884713**	**KT884685**
Septorioides strobi	CBS141444	KT884700	KT884714	KT884686
Septorioides strobi	CBS141445	KT884702	KT884716	KT884688
Septorioides strobi	V-3-11-1	KT884703	KT884717	KT884689
Outgroup				
Lecanosticta acicola	**LNPV 252**	**JX901755**	**JX901639**	**JX901844**

of a random starting tree and 1000 ML bootstrap replicates. The search strategy was set to rapid bootstrapping with one thousand non-parametric bootstrapping iterations using the general time reversible model (GTR) with a discrete gamma distribution. The best scoring trees were selected with a final likelihood values.

Posterior probabilities (PP) were determined by Markov Chain Monte Carlo sampling (BMCMC) in MrBayes v. 3.0b4 (Ronquist & Huelsenbeck 2003). MrModeltest v. 2.3 (Nylander 2004) was used to carry out statistical selection of best-fit model of nucleotide substitution and was incorporated into the analysis. Six simultaneous Markov chains were run for 1 000 000 generations and trees were sampled every 100th generation. The 2000 trees representing the burn-in phase of the analyses, were discarded and the remaining 8000 trees used for calculation of posterior probabilities (PP) in the majority rule consensus tree. The strains used in this study are listed in Table 1 with details of type cultures and sequence data.

Results and Discussion

A complete list of all genera and species in the *Botryosphaeriaceae* that are known from culture is provided in Table 1. Where possible the ex-type isolate together with one further isolate are included. Also included in Table 1 are representative isolates of other familes in the Botryosphaeriales.

The family Botryosphaeriaceae

Presently 23 genera are included the family (Fig. 1). Some doubts remain about the limits of the family, especially regarding the position of *Pseudofusicoccum*. Slippers et al (2013) considered that *Pseudofusicoccum* lies in a separate clade at the base of the family while Phillips et al. (2013) placed it as sister to *Endomelanconiopsis* within *Botryosphaeriaceae*. Although in Fig. 1 we show it to be sister to *Phyllosticta*, and thus within *Phyllostictaceae*, this tree is based on only 3 loci and thus is not as robust as the trees of Slippers et al (2013) or Phillips et al. (2013). Therefore at this stage we consider that *Pseudofucicoccum* is a genus within *Botryosphaeriaceae* even though its position remains uncertain. Apart from *Pseudofusicoccum* the positions of the remaining 22 genera are similar to previously published phylogenies of *Botryosphaeriaceae*.

Genera and species

1. ***Alanphillipsia*** Crous & M.J. Wingf., *Persoonia* 31: 197 (2013), MycoBank MB805816.

Alanphillipsia was introduced to accommodate species that are morphologically aplosporella-like but the conidia have a hyaline outer layer (Crous et al. 2013, 2014). Five species are currently known and all have been reported from the Western Cape Province of South Africa. The sexual morph has not been reported for any species.

Type species – *Alanphillipsia aloes* Crous & M.J. Wingf. 2013.

1.1. ***Alanphillipsia aloeicola*** Crous, *Persoonia* 33: 217 (2014), MycoBank MB810590.

Sexual morph not reported. See Crous et al. (2014) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Clanwilliam, Ramskop, *Aloe* sp. (*Asphodelaceae*), Sept. 2013, M.J. Wingfield (holotype CBS H-21978, culture ex-type CBS 138896).

Host – *Aloe* sp. (Crous et al. 2014).

Distribution – South Africa (Crous et al. 2014).

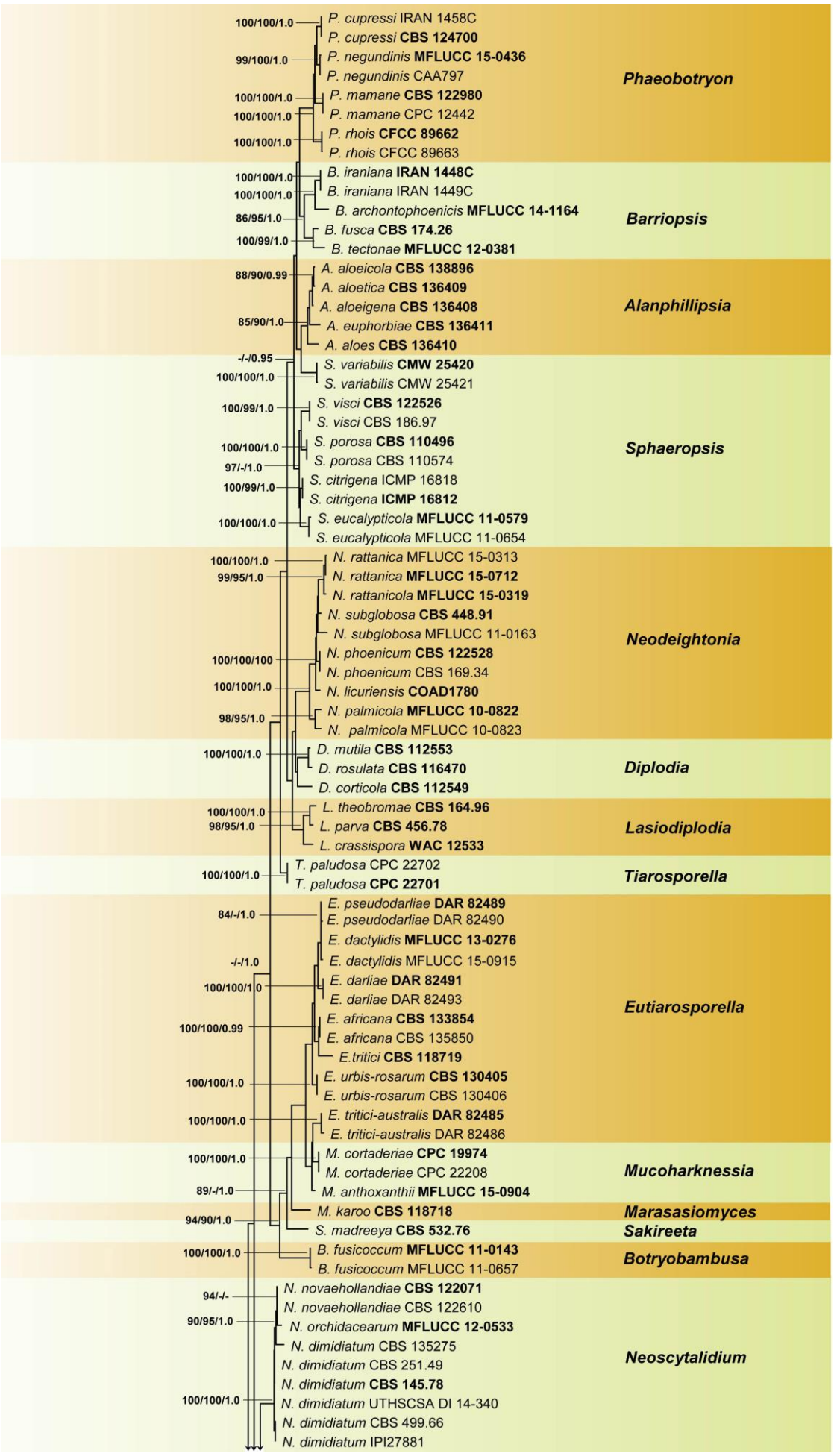
1.2. ***Alanphillipsia aloeigena*** Crous & M.J. Wingf., *Persoonia* 31: 199 (2013), MycoBank MB805818.

Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type–South Africa, Namakwaland, Goegap Nature Reserve, on leaves of *Aloe melanacantha* (*Asphodelaceae*), 26 Sept. 2012, M.J. Wingfield (holotype CBS H-21419, culture ex-type CPC 21286 = CBS 136408).

Host – *Aloe melanocantha* (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).


100/100/1.0
P. cupressi IRAN 1458C
P. cupressi CBS 124700
99/100/1.0
P. negundinis MFLUCC 15-0436
P. negundinis CAA797
100/100/1.0
P. mamane CBS 122980
100/100/1.0
P. mamane CPC 12442
100/100/1.0
P. rhois CFCC 89662
P. rhois CFCC 89663
Phaeobotryon
100/100/1.0
B. iraniana IRAN 1448C
100/100/1.0
B. iraniana IRAN 1449C
86/95/1.0
B. archontophoenicis MFLUCC 14-1164
B. fusca CBS 174.26
100/99/1.0
B. tectonae MFLUCC 12-0381
Barriopsis
88/90/0.99
A. aloeicola CBS 138896
A. aloetica CBS 136409
A. aloeigena CBS 136408
85/90/1.0
A. euphorbiae CBS 136411
A. aloes CBS 136410
Alanphillipsia
-/-/0.95
S. variabilis CMW 25420
100/100/1.0
S. variabilis CMW 25421
100/99/1.0
S. visci CBS 122526
S. visci CBS 186.97
100/100/1.0
S. porosa CBS 110496
97/-/1.0
S. porosa CBS 110574
S. citrigena ICMP 16818
100/99/1.0
S. citrigena ICMP 16812
100/100/1.0
S. eucalypticola MFLUCC 11-0579
S. eucalypticola MFLUCC 11-0654
Sphaeropsis
100/100/1.0
N. rattanica MFLUCC 15-0313
99/95/1.0
N. rattanica MFLUCC 15-0712
N. rattanicola MFLUCC 15-0319
N. subglobosa CBS 448.91
N. subglobosa MFLUCC 11-0163
100/100/100
N. phoenicum CBS 122528
N. phoenicum CBS 169.34
100/100/1.0
N. licuriensis COAD1780
98/95/1.0
N. palmicola MFLUCC 10-0822
N. palmicola MFLUCC 10-0823
Neodeightonia
100/100/1.0
D. mutila CBS 112553
D. rosulata CBS 116470
D. corticola CBS 112549
Diplodia
100/100/1.0
L. theobromae CBS 164.96
98/95/1.0
L. parva CBS 456.78
L. crassispora WAC 12533
Lasiodiplodia
T. paludosa CPC 22702
100/100/1.0
T. paludosa CPC 22701
Tiarosporella
84/-/1.0
E. pseudodarliae DAR 82489
E. pseudodarliae DAR 82490
E. dactylidis MFLUCC 13-0276
-/-/1.0
E. dactylidis MFLUCC 15-0915
100/100/1.0
E. darliae DAR 82491
E. darliae DAR 82493
100/100/0.99
E. africana CBS 133854
E. africana CBS 135850
E.tritici CBS 118719
100/100/1.0
E. urbis-rosarum CBS 130405
E. urbis-rosarum CBS 130406
100/100/1.0
E. tritici-australis DAR 82485
E. tritici-australis DAR 82486
Eutiarosporella
100/100/1.0
M. cortaderiae CPC 19974
M. cortaderiae CPC 22208
89/-/1.0
M. anthoxanthii MFLUCC 15-0904
Mucoharknessia
M. karoo CBS 118718
Marasasiomyces
94/90/1.0
S. madreeya CBS 532.76
Sakireeta
100/100/1.0
B. fusicoccum MFLUCC 11-0143
B. fusicoccum MFLUCC 11-0657
Botryobambusa
94/-/-
N. novaehollandiae CBS 122071
N. novaehollandiae CBS 122610
90/95/1.0
N. orchidacearum MFLUCC 12-0533
N. dimidiatum CBS 135275
N. dimidiatum CBS 251.49
N. dimidiatum CBS 145.78
100/100/1.0
N. dimidiatum UTHSCSA DI 14-340
N. dimidiatum CBS 499.66
N. dimidiatum IPI27881
Neoscytalidium

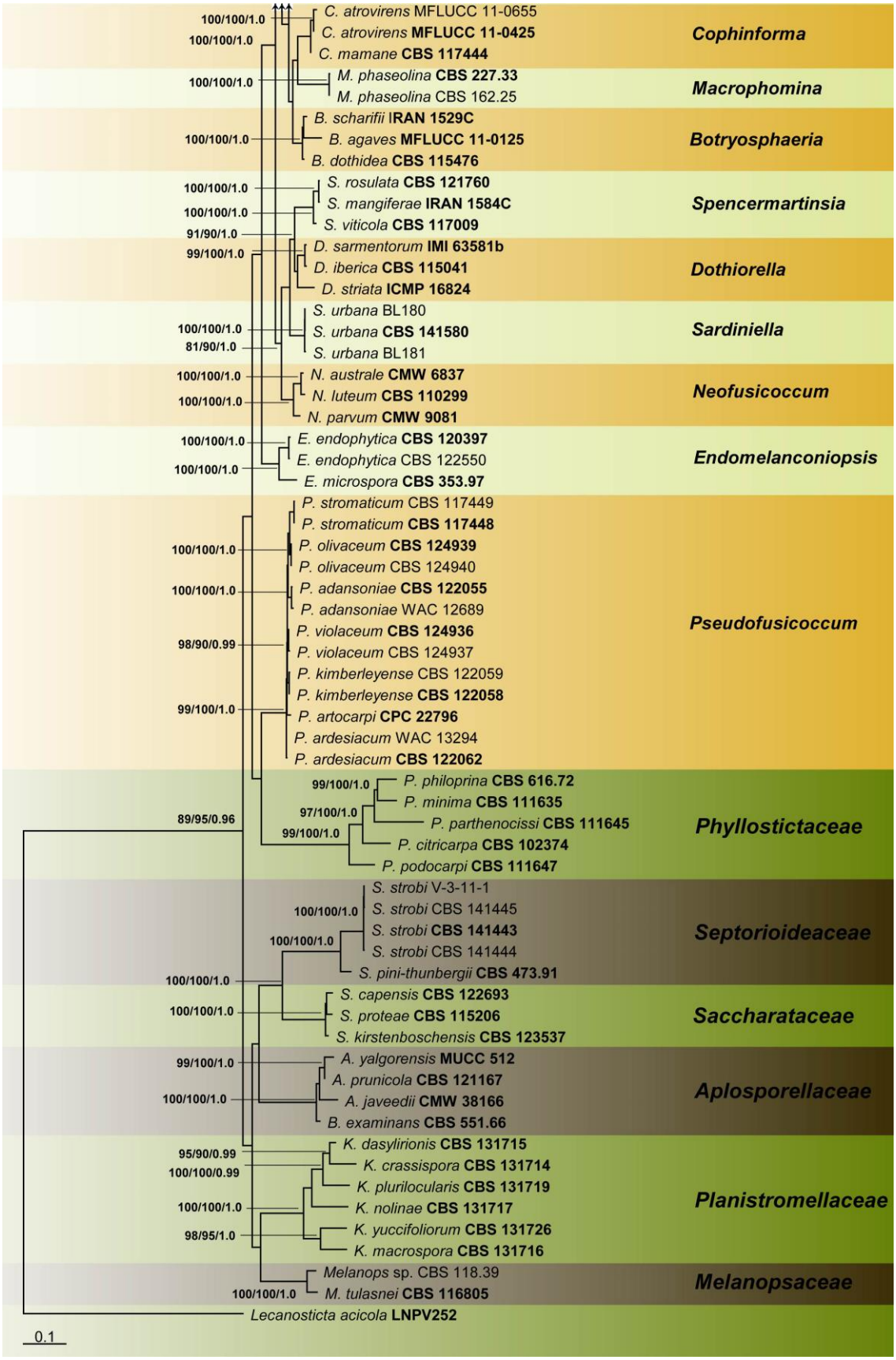


Fig. 1 – Phylogram generated from Maximum Likelihood analysis based on combined ITS, *tef1-α* and LSU dataset of Botryosphaeriales. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities above 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Lecanosticta acicola* (LNPV252).

1.3. ***Alanphillipsia aloes*** Crous & M.J. Wingf., *Persoonia* 31: 197 (2013), MycoBank MB805817.
Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Clanwilliam, on dark lesions of dying *Aloe dichotoma* (*Asphodelaceae*), Sept. 2012, M.J. Wingfield (holotype CBS H-21418, cultures ex-type CPC 21298 = CBS 136410).

Host – *Aloe dichotoma* (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).

1.4. ***Alanphillipsia aloetica*** Crous, *Persoonia* 31: 201 (2013), MycoBank MB805819.

Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Eastern Cape, Uitenhage, on *Aloe* sp. (*Asphodelaceae*), 14 July 2012, P.W. Crous (holotype CBS H-21420, culture ex-type CPC 21110, 21109 = CBS 136409).

Host – *Aloe* sp. (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).

1.5. ***Alanphillipsia euphorbiae*** Crous & M.J. Wingf., *Persoonia* 31: 203 (2013), MycoBank MB805821.

Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Kirstenbosch Botanical Garden, on leaves of *Euphorbia* sp. (*Euphorbiaceae*), Sept. 2012, M.J. Wingfield (holotype CBS H-21421, culture ex-type CPC 21629, 21628 = CBS 136411).

Host – *Aloe* sp. (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).

2. ***Barriopsis*** A.J.L. Phillips, A. Alves & Crous, *Persoonia* 21: 39 (2008), MycoBank MB511712.
Barriopsis comprises four species. Sexual and asexual morphs have been reported within the genus. The pale brown, 1-septate conidia that are striate when immature are unique in the *Botryosphaeriaceae*.

Type species – *Barriopsis fusca* (N.E. Stevens) A.J.L. Phillips, A. Alves & Crous 2008.

2.1. ***Barriopsis archontophoenicis*** Konta, Boonmee & K.D. Hyde, 7: 924 (2016), Facesoffunginumber FOF02097.

Sexual morph and asexual morph illustrations and descriptions in Konta et al. (2016a, this volume). This species forms the sexual morph in culture after long periods of incubation (up to 6 months).

Type – Thailand, Chiang Mai Province, Mushroom Research Centre, on *Archontophoenix alexandrae* (*Arecaceae*), 15 August 2014, S. Konta (holotype MFLU 15–0015, culture ex-type MFLUCC 14–1164, MUCL 55901).

Host – *Archontophoenix alexandrae* (Konta et al. 2016a).

Distribution – Thailand (Konta et al. 2016a).

2.2. ***Barriopsis fusca*** (N.E. Stevens) A.J.L. Phillips, A. Alves & Crous, *Persoonia* 21: 39 (2008), MycoBank MB511713.

Sexual morph illustrations and descriptions are available in Liu et al. (2012) and Phillips et al. (2008, 2013). The only available culture of *B. fusca* (CBS 174.26, ex-type) has lost its ability to

sporulate. According to Stevens (1926) the asexual morph is lasiodiplodia-like with hyaline conidia that become dark-brown and septate with irregular longitudinal striations.

Type – Cuba, Herradura, on twigs of *Citrus* sp. (*Rutaceae*), 15 Jan. 1925, N.E. Stevens (holotype BPI 599052, culture ex-type CBS 174.26).

Host – *Citrus* sp. (Stevens 1926).

Distribution – Cuba (Stevens 1926), Florida (Shear 1923).

2.3. ***Barriopsis iraniana*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 23: 4 (2009), MycoBank MB513235.

Sexual morph not reported. See Abdollahzadeh et al. (2009), Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Hormozgan Province, Minab, Hajikhademi, on twigs of *Mangifera indica* (*Anacardiaceae*), 27 Feb. 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 13939F, culture ex-type IRAN 1448C = CBS 124698).

Hosts – *Citrus* sp., *Mangifera indica*, *Olea* sp. (Abdollahzadeh et al. 2009).

Distribution – Iran (Abdollahzadeh et al. 2009).

2.4. ***Barriopsis tectonae*** Doilom, L.A. Shuttlew. & K.D. Hyde, *Phytotaxa* 176: 84 (2014), MycoBank MB808202.

Sexual morph and asexual morph have been reported. See Doilom et al. (2014) for illustrations and descriptions.

Type – Thailand, Phayao Province: Muang District, on dead branch of *Tectona grandis* (*Lamiaceae*), 12 March 2012, M. Doilom (holotype MFLU 14-0024, culture ex-type MFLUCC 12-0381 = CBS 137786).

Host – *Tectona grandis* (Doilom et al. 2014).

Distribution – Thailand (Doilom et al. (2014).

3. ***Botryobambusa*** Phook., J.K. Liu & K.D. Hyde, *Fungal Diversity* 57: 166 (2012), MycoBank MB801313.

Botryobambusa comprises a single species, which is known in both the sexual and asexual morph.

Type species – *Botryobambusa fusicoccum* Phook., J.K. Liu & K.D. Hyde 2012.

3.1. ***Botryobambusa fusicoccum*** Phook., J.K. Liu & K.D. Hyde, *Fungal Diversity* 57: 166 (2012), MycoBank MB801314.

Sexual morph and asexual morph have been reported. See Liu et al. (2012), Phillips et al. (2013) for illustrations and descriptions.

Type – Thailand, Lampang Province, Jae Hom District, Mae Yuag Forestry Plantation, on dead culms of *Bambusa* sp. (*Poaceae*), 19 Aug. 2010, R. Phookamsak (holotype MFLU 11-0179, culture ex-type CBS 134113 = MFLUCC 11-0143).

Host – *Bambusa* sp. (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

4. ***Botryosphaeria*** Ces. & De Not., *Comm. Soc. crittog. Ital.* 1: 211 (1863), MycoBank MB635.

Type genus of *Botryosphaeriaceae*. *Botryosphaeria* comprises ten species (Fig. 2). Sexual and asexual morphs have been reported in the genus.

Type species – *Botryosphaeria dothidea* (Moug. : Fr.) Ces. & De Not. 1863.

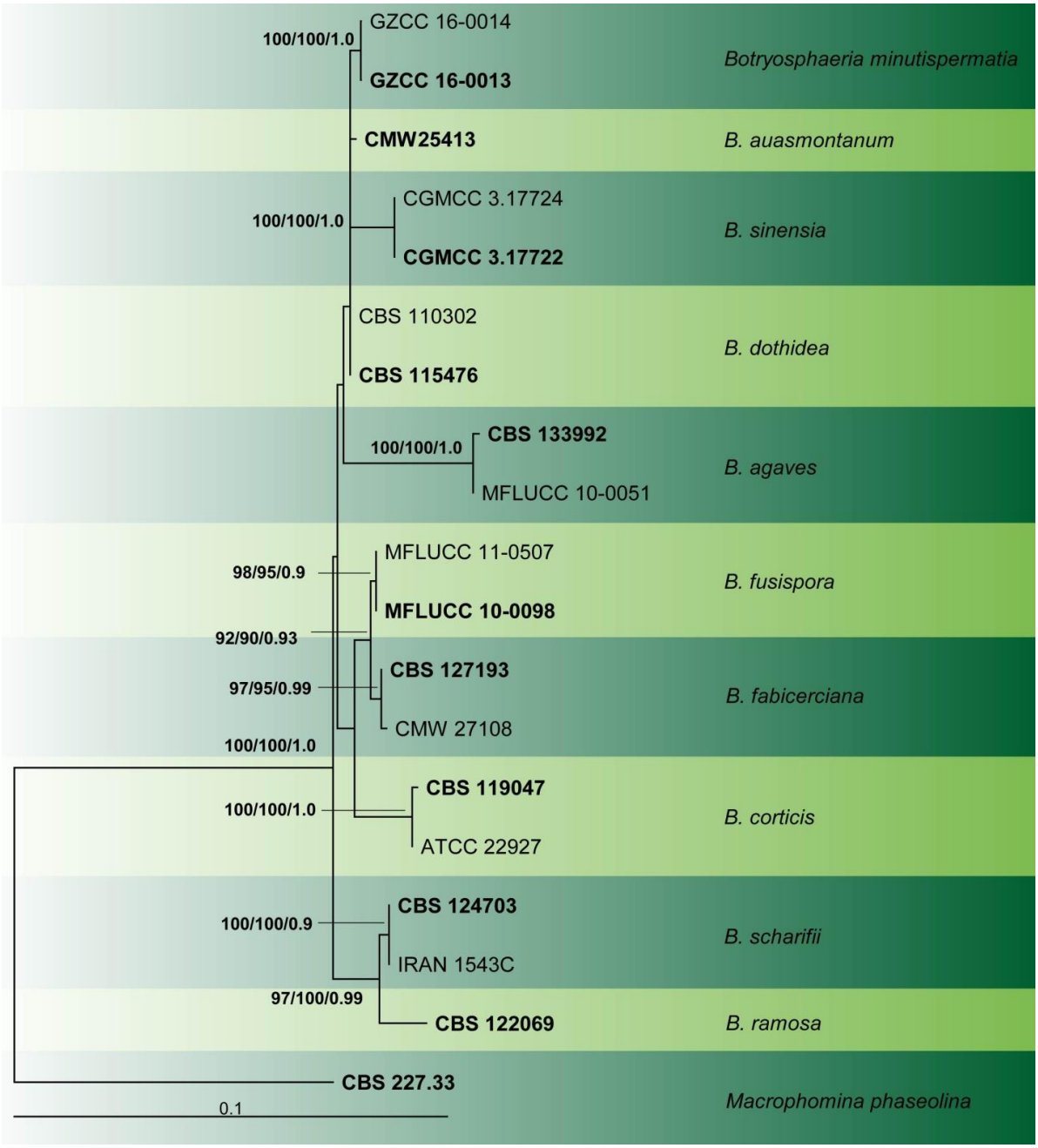


Fig. 2 – Phylogram generated from Maximum Likelihood analysis based on combined ITS and *tef1-α* dataset of *Botryosphaeria*. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities greater than 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Macrophomina phaseolina* (CBS 227.33).

4.1. ***Botryosphaeria agaves*** (Henn.) E.J. Butler, *Annls mycol.* 9: 415 (1911), MycoBank MB119799.

See Liu et al. (2012) and Phillips et al. (2013) for illustrations and descriptions of sexual morph. Asexual morph not reported.

Type – Tanzania, Zanzibar, on leaves of *Agave sisalana*, Zimmerman, holotype presumably lost (not in B). Thailand, Chiang Rai Province, Doi Tung, on living and dead leaves of *Agave* sp. (*Asparagaceae*), 16 Jun. 2010, R. Phookamsak (neotype designated in Phillips et al. (2013) MFLU 11–0161, culture ex-neotype MFLUCC 11–0125 = CBS 133992).

Host – *Agaves* sp. (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

4.2. ***Botryosphaeria auasmontanum*** F.J.J. Van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 162 (2014), MycoBank MB518721.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and descriptions of asexual morph.

Type – Namibia, Windhoek, *Acacia mellifera* (*Fabaceae*), Feb. 2006, F.J.J. van der Walt & J. Roux (holotype PREM 59632, culture ex-type CBS 121769).

Host – *Acacia mellifera* (Slippers et al. 2014).

Distribution – Namibia (Slippers et al. 2014).

4.3. ***Botryosphaeria corticis*** (Demaree & Wilcox) Arx & E. Müll., *Beitr. Kryptfl. Schweiz* 11: 42 (1954), MycoBank MB293807.

Sexual morph and asexual morph have been reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – USA, North Carolina, Atkinson, *Vaccinium corymbosum* (*Ericaceae*), 14 Feb. 1940, J.B. Demaree (holotype BPI 598729), New Jersey, Hammonton, on cankered stems of *V. corymbosum*, May 2005, P.V. Oudemans (epitype CBS H-19706, cultures ex-epitype CBS 119047, CBS 119048).

Hosts – *Vaccinium* species including *V. ashei*, *V. corymbosum*, *V. tenellum* and *V. virgatum* (Phillips et al. 2006, Wright & Harmon 2010).

Distribution – USA (Florida, Georgia, Maryland, Mississippi, New Jersey, North Carolina) (Phillips et al. 2006, Wright & Harmon 2010).

4.4. ***Botryosphaeria dothidea*** (Moug. : Fr.) Ces. & De Not., *Comm. Soc. crittog. Ital.* 1: 212 (1863), MycoBank MB183247.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – France, *Rosa* sp., 1823, Fries ex Mougeot. Herbarium S (neotype of *Sphaeria dothidea* designated by Slippers et al. 2004a). Switzerland, Ticino, Crocifisso, *Prunus* sp., Oct. 2000, B. Slippers (epitype PREM 57372 designated by Slippers et al. (2004a), culture ex-epitype CBS 115476). Italy, on branches of *Aesculus* sp., P.A. Saccardo, PAD, (neotype of asexual morph designated by Crous & Palm 1999).

Hosts – According to USDA fungal database, this species has been reported in 171 host genera belonging to 75 families. However, the validity of many of these records is questionable since they were made prior to the re-evaluation of *B. dothidea* by Slippers et al. (2004a) who established a modern and reliable concept for this species. Studies subsequent to Phillips et al. (2013) confirm the following hosts: *Acer platanoides* in China (Wang et al. 2015), *Artemisia* sp. in China (Cosoveanu et al. 2016), *Camellia sinensis* in China (Jayawardena et al. 2016), *Cupressus sempervirens* in Iran (Mohammadi et al. 2014), *Juglans regia* in California, China (Chen et al. 2014a, Li et al. 2016b), Kiwifruit in China (Zhou et al. 2015), *Malus domestica* in Turkey, Serbia (Vasic et al. 2013, Turkolmez et al. 2016), *Mangifera indica* in Brazil (Marques et al. 2013b, Rabari et al. 2016), ornamental trees in Western Balkans (Zlatkovic et al. 2016), *Phoenix dactylifera* in Iran (Mohammadi 2014), *Pistacia vera* in California, Iran (Chen et al. 2014b, Mohammadi et al. 2014), *Prunus serrulata* in China (Yan et al. 2016), *Psidium guajava* in Brazil (Nogueira Junior et al. 2016), *Pyrus* sp. in China (Zhai et al. 2014), Tobacco in China (Bian et al. 2015), *Vaccinium corymbosum* in China (Xu et al. 2015b), *Vitis vinifera* in Algeria, China, Italy, Tunisia, Turkey (Yan et al. 2013, Ammad et al. 2014, Chebil et al. 2014, Akgul et al. 2015, Carlucci et al. 2015).

Distribution – Worldwide.

4.5. ***Botryosphaeria fabicerciana*** (S.F. Chen, Pavlic, M.J. Wingf. & X.D. Zhou) A.J.L. Phillips & A. Alves, *Stud. Mycol.* 76: 77 (2013), MycoBank MB805457.

Sexual morph not reported. See Chen et al. (2011), Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – China, Fujian Province, from senescing twigs of an unknown *Eucalyptus* sp. (*Myrtaceae*), Aug. 2007, M.J. Wingfield (holotype PREM 60449, culture ex-type CBS 127193).

Hosts – *Eucalyptus* sp. (Chen et al. 2011), *Mangifera indica* (Nogueira Junior et al. 2016, Marques et al. 2013b).

Distribution – China (Chen et al. 2011), Brazil (Marques et al. 2013b, Nogueira Junior et al. 2016).

4.6. ***Botryosphaeria fusispora*** Boonmee, J.K. Liu & K.D. Hyde, *Fungal Diversity* 57: 171 (2012), MycoBank MB 801319.

Sexual morph and asexual morph reported. See Liu et al. (2012) for illustrations and descriptions.

Type – Thailand, Chiang Rai, Doi Tung, on dried bark of *Entada* sp. (*Fabaceae*), 10 Jun. 2009, S. Boonmee (holotype MFLU 10-0028, culture ex-type MFLUCC 10-0098).

Hosts – *Caryota* sp., *Entada* sp. (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

4.7. ***Botryosphaeria minutispermatia*** Ariyawansa, K.D. Hyde & Z.Y. Liu, *Phytotaxa* 275: 40 (2016), Facesoffunginumber FoF02393.

Sexual morph and asexual morph reported. See Ariyawansa et al. (2016) for illustrations and descriptions.

Type – China, Guizhou Province, Guiyang City, Huaxi District, Guizhou Academy of Agricultural Sciences garden, on dead wood, 14 December 2015, HA Ariyawansa (holotype GZAAS 16-0009, culture ex-type GZCC 16-0013).

Host – Unknown host (Ariyawansa et al. 2016).

Distribution – China (Ariyawansa et al. 2016).

4.8. ***Botryosphaeria ramosa*** (Pavlic, T.I. Burgess & M.J. Wingf.) A.J.L. Phillips & A. Alves, *Stud. Mycol.* 76: 77 (2013), MycoBank MB805458.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Australia, Western Australia, Bell Gorge, on *Eucalyptus camaldulensis* (*Myrtaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59846, culture ex-type CBS 122069).

Host – *Eucalyptus camaldulensis* (Pavlic et al. 2008).

Distribution – Australia (Pavlic et al. 2008).

4.9. ***Botryosphaeria scharifii*** Abdoll., Zare & A.J.L. Phillips, *Mycologia* 105: 213 (2013), MycoBank MB564800

Sexual morph not reported. See Abdollahzadeh et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Tehran, on fruits of *Mangifera indica* (*Anacardiaceae*) imported from Pakistan, Aug. 2006, J. Abdollahzadeh (holotype IRAN 14275F, culture ex-type CBS 124703).

Host – *Mangifera indica* (Abdollahzadeh et al. 2013).

Distribution – Iran, Pakistan (Abdollahzadeh et al. 2013).

4.10. ***Botryosphaeria sinensia*** Y.P. Zhou, Y. Zhang ter. *Phytotaxa* 245: 043 (2016), MycoBank MB813802.

Sexual morph and asexual morph have been reported. See Zhou et al. (2016) for illustrations and descriptions.

Type – China, Henan Province, Puyang, Qingfeng county, on twigs of *Populus* sp. (*Salicaceae*), 11 Nov. 2014 (holotype HMAS 246714!, culture ex-type CGMCC 3.17722).

Hosts – *Juglans regia*, *Morus* sp., *Populus* sp. (Zhou et al. 2016).

Distribution – China (Zhou et al. 2016).

5. ***Cophinforma*** Doilom, J.K. Liu & K.D. Hyde, *Fungal Diversity* 57: 174 (2012), MycoBank MB801315.

This genus comprises two species. Sexual morph and asexual morph have been reported within the genus.

Type species – *Cophinforma atrovirens* (Mehl & Slippers) A. Alves & A.J.L. Phillips 2013.

5.1. ***Cophinforma atrovirens*** (Mehl & Slippers) A. Alves & A.J.L. Phillips, *Stud. Mycol.* 76: 80 (2013), MycoBank MB805459.

Although Phillips et al. (2013) stated that the sexual morph has not been reported, Liu et al. (2012) described and illustrated the sexual morph of *C. eucalypti*, which Phillips et al. (2013) regarded as a synonym of *C. atrovirens*. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Mpumalanga Province, Mawewe Nature Reserve, from an asymptomatic branch of *Pterocarpus angolensis* (*Fabaceae*), Dec. 2005, J.W.M. Mehl & J. Roux (holotype PREM 60341, culture ex-type CBS 124934, paratype PREM 60342, culture ex-papartype CBS 124935).

Hosts – *Eucalyptus* sp. (Liu et al. 2012), *Eucalyptus urophylla* (Xu et al. 2015a), *Pterocarpus angolensis* (Mehl et al. 2011).

Distribution – South Africa (Mehl et al. 2011), Thailand (Liu et al. 2012), Venezuela (Xu et al. 2015a).

5.2. ***Cophinforma mamane*** (D.E. Gardner) A.J.L. Phillips & A. Alves, *Stud. Mycol.* 76: 80 (2013), MycoBank MB805460.

Sexual morph and asexual morph reported. See Gardner (1997) for illustrations and Phillips et al. 2013 for descriptions of asexual morph.

Type – USA, Hawaii, Hawaii Island, Hawaii Volcanoes National Park, Kipuka Ki, on bark of a swollen branch of *Sophora chrysophylla* (*Fabaceae*), 1 May 1996, D.E. Gardner (holotype BISH 644614, no cultures extant; isotype BISH 737731, no cultures extant; paratypes BPI 737732, BPI 737733, no cultures extant).

Hosts – *Sophora chrysophylla* (Gardner 1997), *Mangifera indica* (Marques et al. 2013b), *Vitis vinifera* (Correia et al. 2013).

Distribution – Brazil (Correia et al. 2013, Marques et al. 2013b), USA (Hawaii) (Gardner 1997).

6. ***Diplodia*** Fr., in Montagne, *Annls Sci. Nat., Bot., sér.* 2, 1: 302 (1834), MycoBank MB8047.

This genus comprises 26 species (Fig. 3). Sexual and asexual morphs have been reported.

Type species – *Diplodia mutila* (Fr. : Fr.) Fr. 1849.

6.1. ***Diplodia africana*** Damm & Crous, *Mycologia* 99: 671 (2008), MycoBank MB501323.

Sexual morph not reported. See Damm et al. (2007), Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Paarl, from wood section close to pruning wound of *Prunus persica* (*Rosaceae*), 10 Jun. 2004, U. Damm (holotype CBS H-19843, culture ex-type CBS 120835, additional culture STE-U 6289).

Hosts – *Juniperus phoenicea* (Alves et al. 2014), *Prunus persica* (Damm et al. 2007).

Distribution – Italy (Alves et al. 2014), South Africa (Damm et al. 2007).

6.2. ***Diplodia agrifolia*** S.C. Lynch & Eskalen, *Mycologia* 105: 135 (2012), MycoBank MB800443.

Sexual morph not reported. See Lynch et al. (2013), Phillips et al. 2013 for illustrations and descriptions of asexual morph.

Type – USA, California, San Diego County, Mataguay Scout Camp, on cankered branch of *Quercus agrifolia* (*Fagaceae*), 23 Feb. 2010, S.C. Lynch & A. Eskalen (holotype BPI 884095, culture ex-type CBS 132777 = ATCC MYA-4895 = UCROK 732).

Hosts – *Quercus agrifolia*, *Q. kelloggii* (Lynch et al. 2013).

Distribution – USA (Lynch et al. 2013).

6.3. ***Diplodia alatafructa*** Mehl & Slippers, *Mycologia* 103: 542 (2011), MycoBank MB513498.

Sexual morph not reported. See Mehl et al. (2011), Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Mpumalanga Province, Sudwala Caves area, from a stem wound on *Pterocarpus Angolensis* (*Fabaceae*), Dec. 2005, J.W.M. Mehl & J. Roux (holotype PREM 60337, culture ex-type CBS 124931).

Host – *Pterocarpus angolensis* (Mehl et al. 2011).

Distribution – South Africa (Mehl et al. 2011).

6.4. ***Diplodia allocellula*** Jami, Gryzenh., Slippers & M.J. Wingf., *Cryptog. Mycol.* 33: 256 (2012), MycoBank MB564140

Sexual morph not reported. See Jami et al. (2012), Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from branch of *Acacia karroo* (*Fabaceae*) Nov. 2009, M. Gryzenhout & F. Jami (holotype PREM 60701, culture ex-type CBS 130408).

Host – *Acacia karroo* (Jami et al. 2012).

Distribution – South Africa (Jami et al. 2012).

6.5. ***Diplodia bulgarica*** A.J.L. Phillips, J. Lopes & Bobev, *Persoonia* 29: 33 (2012), MycoBank MB19632.

Sexual morph not reported. See Phillips et al. (2012, 2013) for illustrations and descriptions of asexual morph.

Type – Bulgaria, Plovdiv, on dead twigs of *Malus sylvestris* (*Rosaceae*), 2005, S.G. Bobev (holotype CBS H-20189, culture ex-type CBS 124254).

Host – *Malus* sp. (Phillips et al. 2012).

Distribution – Bulgaria, Iran (Phillips et al. 2012).

6.6. ***Diplodia corticola*** A.J.L. Phillips, A. Alves & J. Luque, *Mycologia* 96: 603 (2004), MycoBank MB488568.

Sexual morph and asexual morph reported. See Phillips et al. 2013 for illustrations and descriptions.

Type – Portugal, Beira Littoral, Requeixo near Aveiro, on dead branches of *Quercus suber* (*Fagaceae*), Feb. 2002, A. Alves (holotype LISE 94839, culture ex-type CBS 112549).

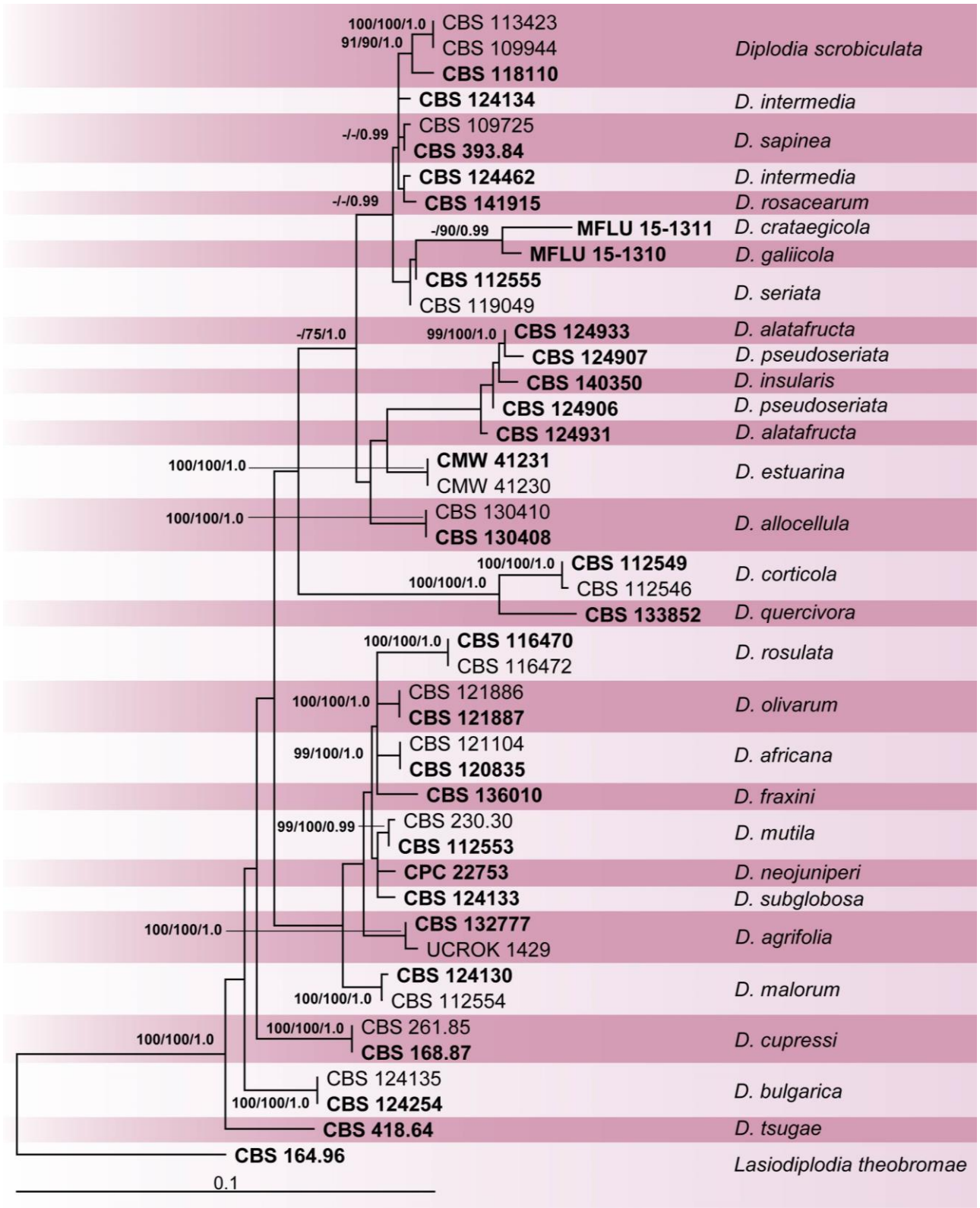


Fig. 3 – Phylogram generated from Maximum Likelihood analysis based on combined ITS and *tef1-α* dataset of *Diplodia*. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities above 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Lasiodiplodia theobromae* (CBS 164.96).

Hosts – *Quercus* sp. (Alves et al. 2004, Linaldeddu et al. 2014, Acimovic et al. 2016), *Vitis vinifera* (Úrbez-Torres et al. 2010, Carlucci et al. 2015).

Distribution – Italy (Carlucci et al. 2015, Linaldeddu et al. 2014), Portugal, Spain, Tunisia, USA (Alves et al. 2004, 2014), California (Úrbez-Torres et al. 2010), Maine (Acimovic et al. 2016).

6.7. ***Diplodia crataegicola*** Dissanayake, Camporesi & K.D. Hyde, *Fungal Diversity* 75: 51 (2015), Facesoffunginumber FoF00885.

Sexual morph not reported. See Ariyawansa et al. (2015) for illustrations and descriptions of asexual morph.

Type – Italy, Province of Forlì-Cesena [FC], Passo del Barbotto–Mercato Saraceno, on dead branch of *Crataegus* sp. (*Rosaceae*), 3 November 2012, E. Camporesi (holotype MFLU 15-1311, cultures ex-type MFLUCC 15–0648, KUMCC15-0075, GZCC 15-0002.

Host – *Crataegus* sp. (Ariyawansa et al. 2015).

Distribution – Italy (Ariyawansa et al. 2015).

6.8. ***Diplodia cupressi*** A.J.L. Phillips & A. Alves, *Fungal Diversity* 23: 9 (2006), MycoBank MB510136.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Israel, Bet Dagan, dried culture from cankered stems of *Cupressus sempervirens* (*Cupressaceae*), 1986, Z. Solel (holotype IMI 303475, culture ex-type CBS 168.87).

Hosts – *Cupressus* and *Juniperus* sp. (Alves et al. 2006, 2014, Solel et al. 1987).

Distribution – Cyprus, Greece, Israel, Italy, Morocco, South Africa, Tunisia, USA (de Wet et al. 2009, Alves et al. 2006, 2014, Solel et al. 1987).

6.9. ***Diplodia estuarina*** J.A Osorio, Jol. Roux & Z.W. de Beer, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.004, 2016), MycoBank MB812009.

Sexual morph not reported. See Osorio et al. (2016) for illustrations and description of asexual morph.

Type – South Africa, Kwazulu Province, St. Lucia and Richards Bay, from asymptomatic branches of *Avicennia marina* (*Acanthaceae*), J.A. Osorio & Jol. Roux (holotype PREM 61247, culture ex-type CBS 139666).

Hosts – *A. marina* and *R. mucronata* (Osorio et al. 2016).

Distribution – South Africa (Osorio et al. 2016).

6.10. ***Diplodia fraxinii*** (Fr. : Fr.) Fr., Summa Veg. Scand. 2: 417. 1849. MycoBank MB247549.

Sexual morph not reported. See Alves et al. (2014) for illustrations and descriptions of asexual morph.

Type – Portugal, Monte da Caparica, on dead twigs of *Fraxinus angustifolia* (*Oleaceae*), 14 March 2013, Antonio Deidda (neotype LISE 96134, MBT176183, culture ex-neotype CBS 136010). Cascais, on dead twigs of *F. angustifolia*, 13 April 2013, Antonio Deidda (designated as morphotype A, culture CBS 136012 = CAD010).

Host – *Fraxinus* sp. (Alves et al. 2014).

Distribution – Italy, Netherlands, Portugal (Alves et al. 2014).

6.11. ***Diplodia galiicola*** Dissanayake, Camporesi & K.D. Hyde, *Fungal Diversity* 75: 54 (2015), Facesoffunginumber FoF00884.

Sexual morph not reported. See Ariyawansa et al. (2015) for illustrations and descriptions of asexual morph. Linaldeddu et al. (2016c) consider this species a synonym of *D. seriata*.

Type – Italy, Province of Forlì-Cesena [FC], Strada San Zeno, Galeata, on dead stem of *Galium* sp. (*Rubiaceae*), 30 October 2013, E. Camporesi, IT 1495 (holotype MFLU 15-1310, culture ex-type MFLUCC 15–0647).

Host – *Galium* sp. (Ariyawansa et al. 2015).

Distribution – Italy (Ariyawansa et al. 2015).

6.12. ***Diplodia insularis*** Linaldeddu, A. Alves & A.J.L. Phillips, *Mycosphere* 7: 968 (2016), MycoBank MB818231, Facesoffunginumber FoF 02607.

Sexual morph not reported. See Linaldeddu et al. (2016c this volume) for illustrations and descriptions of the asexual morph.

Type – Italy, Santa Maria Island, isolated from a branch canker of *Pistacia lentiscus* (*Anacardiaceae*), 7 November 2013, Benedetto T. Linaldeddu, (holotype LISE 96309, culture ex-type CBS 140350).

Hosts – *Eriobotrya japonica*, *Fraxinus angustifolia*, *Pistacia lentiscus* (Linaldeddu et al. 2016c this volume).

Distribution – Caprera, Santa Maria, Sardinia (Italy) and Castellón (Spain) (Linaldeddu et al. 2016c this volume).

6.13. ***Diplodia intermedia*** A.J.L. Phillips, J. Lopes & Bobev, *Persoonia* 29: 33 (2012), MycoBank MB19633.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Portugal, Setúbal, Monte da Caparica, dead twigs of *Malus sylvestris* (*Rosaceae*), Mar. 2006, A.J.L. Phillips (holotype CBS H-20190, culture ex-type CBS 124462).

Hosts – *Cydonia*, *Malus* (Phillips et al. 2012).

Distribution – Portugal (Phillips et al. 2012).

6.14. ***Diplodia malorum*** Fuckel, *Jb. nassau. Ver. Naturk.* 23-24: 395 (1870), MycoBank MB246351

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Germany, Rhineland, on *Malus* sp. (*Rosaceae*), 1870, J. Fuckel, Fuckel, Fungi rhenani Nº 1706 (holotype in G, isotypes K and M). Portugal, Setúbal, Monte da Caparica, *Malus sylvestris*, Feb. 2006, A.J.L. Phillips (epitype CBS H-201888, culture ex-epitype CBS 124130).

Hosts – *Malus* sp. (Phillips et al. 2012), *Populus alba* (Alves et al. 2014).

Distribution – Germany, Portugal (Phillips et al. 2012), Italy (Alves et al. 2014).

6.15. ***Diplodia mutila*** (Fr. : Fr.) Fr., *Summa Veg. Scand.* 2: 417 (1849), MycoBank MB201741.

Sexual morph and asexual morph reported. See Phillips et al. (2013), Alves et al. (2014) for illustrations and descriptions.

Type – France, Ardenne, Sedan, on bark of *Populus nigra* (*Salicaceae*), date unknown, Montagne (isotype K 99664). PORTUGAL, Beira Litoral, Aveiro, *Populus alba*, 2012, A. Alves, (epitype LISE 96136, culture ex-epitype CBS 136014).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Chamaecyparis lawsoniana*, *Fraxinus excelsior*, *Fraxinus ornus*, *Ilex* sp., *Persea americana*, *Phoenix dactylifera*, *Populus alba*, *Prunus salicina*, *Taxus baccata*, *Vitis vinifera* (Alves et al. 2014). *Aesculus hippocastanum* (Zlatkovic et al. 2016), *Cupressus arizonica* (Zlatkovic et al. 2016), *Malus domestica* (Úrbez-Torres et al. 2016), *P. halepensis* (Zlatkovic et al. 2016), *Phoenix dactylifera* (Mohammadi et al. 2014), *Vitis vinifera* (Carlucci et al. 2015).

Distribution – British Columbia (Úrbez-Torres et al. 2016), England, Italy, Portugal, South Africa, USA (Alves et al. 2014), Italy (Carlucci et al. 2015), Iran (Mohammadi et al. 2014), Montenegro, Serbia (Zlatkovic et al. 2016).

6.16. ***Diplodia neojuniperi*** T. Trakunyingcharoen, L. Lombard & Crous, *Persoonia* 34: 92 (2014), MycoBank MB810168.

Sexual morph not reported. See Trakunyingcharoen et al. (2015b) for illustrations and descriptions of asexual morph.

Type – Thailand, Chiang Mai province, on leaf of *Juniperus chinensis* (*Cupressaceae*), Feb. 2012, T. Trakunyingcharoen (holotype CBS H-21932, culture ex-type CBS 138652).

Host – *Juniperus chinensis* (Trakunyingcharoen et al. 2015b).

Distribution – Thailand (Trakunyingcharoen et al. 2015b).

6.17. ***Diplodia olivarum*** A.J.L. Phillips, Frisullo & Lazzizera, *Fungal Diversity* 31: 67 (2008), MycoBank MB511402.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Italy, Puglia, Lecce, Scorrano, Basco Belvedere, on rotting drupes of *Olea europaea* (*Oleaceae*), Dec. 2004, S. Frisullo (holotype CBS H-19914, culture ex-type CBS 121887).

Hosts – *Ceratonia siliqua* (Alves et al. 2014), *Olea europaea* (Lazzizera et al. 2008), *Quercus coccifera* (Alves et al. 2014).

Distribution – Italy (Lazzizera et al. 2008, Alves et al. 2014), Spain (Gramaje et al. 2012), Tunisia (Alves et al. 2014).

6.18. ***Diplodia pseudoseriata*** C.A. Pérez, Blanchette, Slippers & M.J. Wingf., *Fungal Diversity* 41: 63 (2009), MycoBank MB513545.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Uruguay, Paysandu, Guaviyu, isolated from asymptomatic twig of *Blepharocalyx salicifolius* (*Myrtaceae*), Aug. 2006, C. Pérez (holotype PREM 60264, culture ex-type CBS 124906 (ex-type).

Hosts – *Acca sellowiana*, *Blepharocalyx salicifolius*, *Eugenia uniflora*, *Eugenia involucrata*, *Hexachlamis edulis*, *Myrceugenia euosma*, *Myrciaria tenella*, *Myrcianthes cisplatensis* (Pérez et al. 2010), *Fraxinus angustifolia* (Alves et al. 2014).

Distribution – Italy (Alves et al. 2014), Uruguay (Pérez et al. 2010).

6.19. ***Diplodia quercivora*** Linald. & A.J.L. Phillips, *Mycologia* 105: 1269 (2013), MycoBank MB801757.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Tunisia, Tabarka, isolated from branch cankers of *Quercus canariensis* (*Fagaceae*), 20 Sep. 2006, B.T. Linaldeddu (holotype LISE 96110, culture ex-type CBS 133852).

Hosts – *Quercus canariensis* (Linaldeddu et al. 2013), *Quercus virginiana* (Dreaden et al. 2014).

Distribution – Tunisia (Linaldeddu et al. 2013), USA (Dreaden et al. 2014).

6.20. ***Diplodia rosacearum*** S. Giambra, A. Alves, J. Armengol & S. Burruano, *Mycosphere* 7: 983 (2016), MycoBank MB818575.

Sexual morph not reported. See Giambara et al. (2016) for illustrations and description of the asexual morph.

Type – Italy, Sicily, S. Maria di Gesù, isolated from a branch canker of *Eriobotrya japonica* (*Rosaceae*), March 2015, S. Giambra, (holotype LISE 96310, culture ex-holotype CBS 141915).

Host – *Eriobotrya japonica* (Giambara et al. 2016).

Distribution – Italy (Giambara et al. 2016).

6.21. ***Diplodia rosulata*** Gure, Slippers & Stenlid, *Mycol. Res.* 109: 1010 (2005), MycoBank MB344348.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Ethiopia, Southeastern Oromia, Gambo, Munessa-Shashamane Forest Enterprise, from seeds of *Prunus africana* (*Rosaceae*), 20 Jul. 2001, A. Gure (holotype CBS H-12357, culture ex-type CBS 116470).

Host – *Prunus africana* (Gure et al. 2005).

Distribution – Ethiopia (Gure et al. 2005).

6.22. ***Diplodia sapinea*** (Fr.) Fuckel, *Jb. nassau. Ver. Naturk.* 23-24: 393 (1870), MycoBank MB146913.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Sweden, Suecia Smaland, Femsjo, on *Pinus* sp. (*Pinaceae*), E. Fries, Scleromyceti Sueciae Exsiccati No 126, *Sphaeria sapinea* Fries, lectotype: B, isotypes: G, K, E, UPS, C, BR, FH. The Netherlands, Gelderland, Schovenhorst, Putten, Pinetum, on cones of *Pinus nigra*, June 1984, H.A. van der Aa. (Epitype CBS H-18340, culture ex-epitype CBS 393.84).

Host – Mostly in *Pinus* sp. (Alves et al. 2014, Adamson et al. 2015, Zlatkovic et al. 2016).

Distribution – Worldwide.

6.23. ***Diplodia scrobiculata*** J. de Wet, Slippers & M.J. Wingf., *Mycol. Res*. 107: 562 (2003), MycoBank MB372427.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – USA, Wisconsin, Jackson County, *Pinus banksiana* (*Pinaceae*), 1987, M.A. Palmer, (holotype PREM 57461, culture ex-type CBS 118110).

Hosts – *Olea europaea*, *Arbutus unedo* (Alves et al. 2014), *Pinus banksiana*, *P. resinosa*, and *P. greggii* (de Wet et al. 2003).

Distribution – Europe (France, Italy), Mexico and, USA (California, Minnesota, Wisconsin) (de Wet et al. 2003, Alves et al. 2014).

6.24. ***Diplodia seriata*** De Not., *Micr. Ital., Dec. 4*: no. 6 (1842), MycoBank MB180468.

Sexual morph and asexual morph reported. See Phillips et al. (2013), Alves et al. (2014) for illustrations and descriptions.

Type – Italy, on dead stems of *Jasminium* sp., 18 Aug. 1837, De Notaris (holotype HERB RO). Portugal, Montemor-o-Novo, on dead stems of *Vitis vinifera* (*Vitaceae*), 31 Jul. 1997, A.J.L. Phillips, (epitype CBS H-19809, culture ex-epitype CBS 112555).

Hosts – Plurivorous.

Distribution – Worldwide.

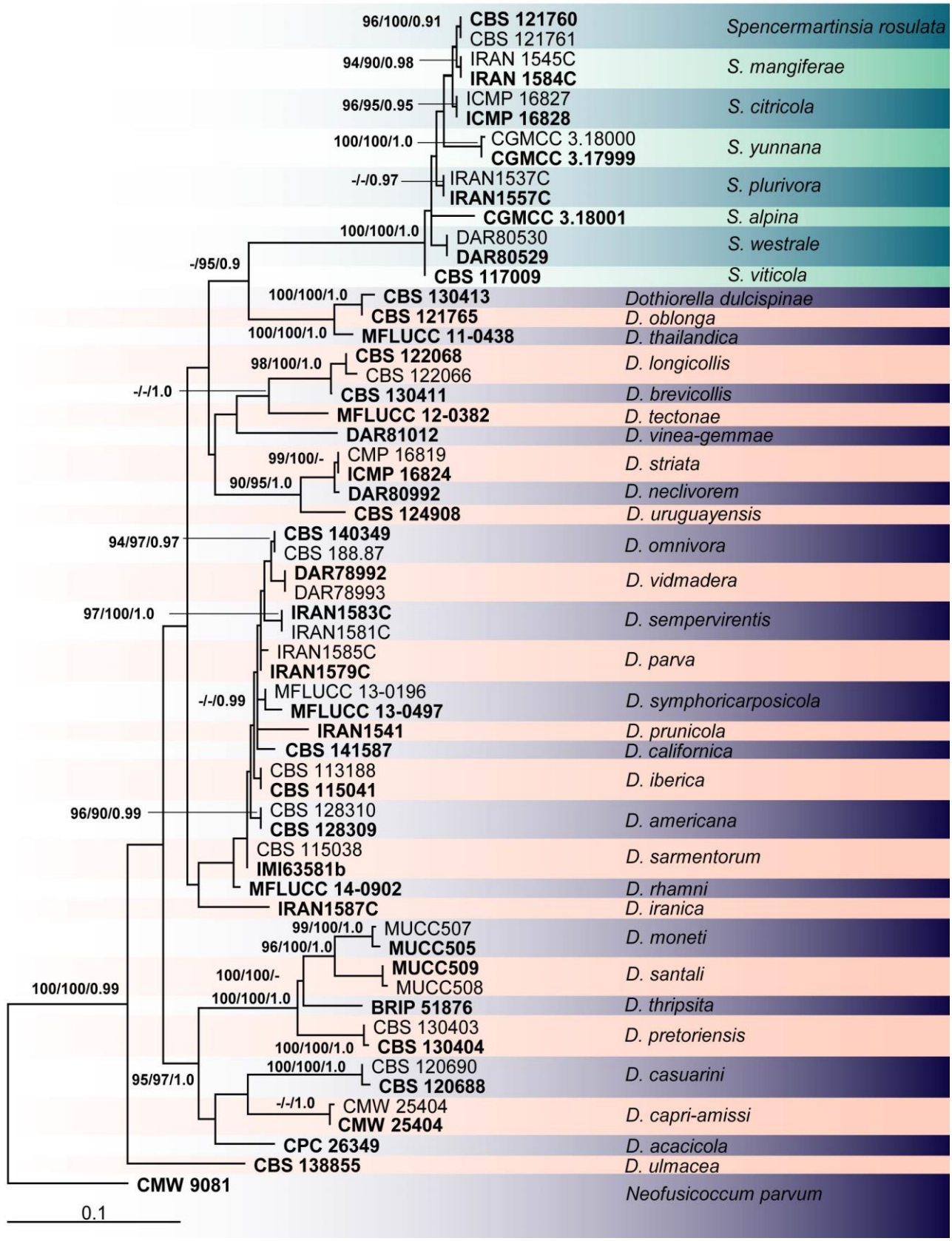


Fig. 4 – Phylogram generated from Maximum Likelihood analysis based on combined ITS and *tef1-α* dataset of *Dothiorella* and *Spencermartinsia*. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities above 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Neofusicoccum parvum* (CMW 9081).

6.25. ***Diplodia subglobosa*** A.J.L. Phillips, Deidda & Linald., *Fungal Diversity* 67: 152 (2014), MycoBank MB806049.

Sexual morph not reported. See Alves et al. (2014) for illustrations and descriptions of asexual morph.

Type – Spain, Cataluña, *Lonicera nigra*, (no date), J. Luque (holotype LISE 96135, culture ex-type CBS 124133). Other cultures: Spain, Cataluña, *Fraxinus excelsior* (*Oleaceae*), (no date), J. Luque (CBS 124132). Italy, Sicily, *Fraxinus ornus*, 2006, A. Sidoti (CBS 124131); *Fraxinus excelsior*, (no date) B. Slippers (CMW7776).

Hosts – *Fraxinus* sp., *Lonicera nigra* (Alves et al. 2014).

Distribution – Italy and Spain (Alves et al. 2014).

6.26. ***Diplodia tsugae*** (A. Funk) A.J.L. Phillips & A. Alves, *Persoonia* 29: 35 (2012), MycoBank MB801409.

Sexual morph and asexual morph reported. See Funk (1964) for illustrations and Phillips et al. 2013, for descriptions.

Type – Canada, British Columbia, near Coola (Snootli Creek), on branches of *Tsuga heterophylla* (*Pinaceae*), 11 Sep. 1963, A. Funk (holotype DAVFP 15485. Lake Cowichan, 1 Nov. 1962, A. Funk, isotype CBS H-6790, culture ex-isotype CBS 418.64 = IMI 197143).

Host – *Tsuga heterophylla* (Funk 1964).

Distribution – Canada (British Columbia) (Funk 1964).

7. ***Dothiorella*** Sacc., Michelia 2: 5 (1880), MycoBank MB8098.

This genus comprises 30 species (Fig. 4). Sexual morph and the asexual morph have been reported within the genus. The number of species described in this genus has doubled since 2013 when Phillips et al (2013) included 12 species names and 16 unnamed lineages. With this increase in the number of species the phylogenetic separation between *Dothiorella* and *Spencermartinsia* has become less distinct. Nevertheless, we continue to regard these as two genera pending a detailed re-evaluation.

Type species – *Dothiorella pyrenophora* Sacc., *Michelia* 2: 5. 1880.

7.1. ***Dothiorella acacicola*** Crous & M.J. Wingf., *Persoonia* 36: 354 (2016), MycoBank MB817032.

Sexual morph not reported. See Crous et al. (2016) for illustrations and descriptions of asexual morph.

Type – France, La Réunion, S21°12'47.6" E55°36'48.7", on leaves of *Acacia mearnsii* (*Fabaceae*), 8 Mar. 2015, P.W. Crous & M.J. Wingfield (holotype CBS H-22607, culture ex-type CPC 26349 = CBS 141295).

Host – *Acacia mearnsii* (Crous et al. 2016).

Distribution – France (Crous et al. 2016).

7.2. ***Dothiorella americana*** Úrb.-Torr., Peduto & Gubler, *Fungal Diversity* 52: 184 (2012), MycoBank MB519956.

Sexual morph not reported. See Úrbez-Torres et al. (2012) for illustrations and descriptions of asexual morph.

Type – USA, Missouri, Purdy, on diseased interspecific grape cultivar Vignoles (Ravat51), R.K. Striegler & G.M. Leavitt (holotype UCD2252MO, culture ex-type CBS 128309).

Host – *Vitis* sp. (Úrbez-Torres et al. 2012).

Distribution – USA (Missouri) (Úrbez-Torres et al. 2012).

7.3. ***Dothiorella brevicollis*** Jami, Gryzenh., Slippers & M.J. Wingf., *Cryptog. Mycol.* 33: 256 (2012), MycoBank MB564142.

Sexual morph not reported. See Jami et al. (2012) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from healthy wood section of *Acacia karroo* (*Fabaceae*), Nov. 2009, F. Jami (holotype PREM 60704, culture ex-type CBS 130411).

Host – *Acacia karroo* (Jami et al. 2012).

Distribution – South Africa (Gauteng Province) (Jami et al. 2012).

7.4. ***Dothiorella californica*** D.P. Lawr. & Trouillas, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.005, 2016), MycoBank MB817293.

Sexual morph not reported. See Lawrence et al. (2016) for illustrations and descriptions of asexual morph.

Type – USA, California: Napa County, 38.4367° N, 122.4028° W, near Oakville 294 CA, 47 m.a.s.l., isolated from discolored wood of *Umbellularia californica* (*Lauraceae*) November 2004, F.P. Trouillas (holotype BPI 910162, culture ex-type CBS 141587).

Host – *Umbellularia californica* (Lawrence et al. 2016).

Distribution – California (Lawrence et al. 2016).

7.5. ***Dothiorella capri-amissi*** F.J.J. van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 162 (2014), MycoBank MB518723.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and descriptions of asexual morph.

Type – South Africa, Prieska, from *Acacia erioloba* (*Fabaceae*), Feb. 2005, F.J.J. van der Walt & G.J. Marais (holotype PREM 59626, culture ex-type CBS 121878).

Host – *Acacia erioloba* (Slippers et al. 2014).

Distribution – South Africa (Slippers et al. 2014).

7.6. ***Dothiorella casuarini*** J. de Wet, Slippers & M.J. Wingf., *Mycologia* 101: 505 (2009), MycoBank MB510856.

Sexual morph not reported. See de Wet et al. (2009) for illustrations and descriptions of asexual morph.

Type – Australia, Canberra, Cotter River, on *Casuarina* sp. (*Casuarinaceae*), 2000, M.J. Wingfield (holotype PREM 59650, culture ex-type CBS 120688).

Host – *Casuarina* sp. (de Wet et al. 2009).

Distribution – Australia (Canberra) (de Wet et al. 2009).

7.7. ***Dothiorella dulcispinae*** Jami, Gryzenh., Slippers & M.J. Wingf., *Cryptog. Mycol.* 33: 256 (2012), MycoBank MB564141.

Sexual morph not reported. See Jami et al. (2012) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from die-back wood section of *Acacia karroo* (*Fabaceae*), Nov. 2009, F. Jami (holotype PREM 60706, culture ex-type CBS 130413).

Hosts – *Acacia karroo* (Jami et al. 2012), *Acacia mellifera* (Slippers et al. 2014).

Distribution – Namibia (Slippers et al. 2014), South Africa (Gauteng Province) (Jami et al. 2012).

7.8. ***Dothiorella iberica*** A.J.L. Phillips, J. Luque & A. Alves, *Mycologia* 97: 524 (2005), MycoBank MB344530.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Spain, Zaragoza province, Aragon, Tarazona, on dead twigs of *Quercus ilex* (*Fagaceae*), Dec. 2002, J. Luque (holotype LISE 94944, culture ex-type CBS 115041).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Acer opalus* (Dissanayake et al. 2016), *Citrus sinensis* (Adesemoye et al. 2014), *Ostrya* sp. (Pavlic-Zupanc et al. 2015), *Pistacia* sp. (Chen et al. 2014b), *Prunus dulcis* (Doll et al. 2015), *Quercus agrifolia* (Lynch et al. 2014).

Distribution – Recent studies subsequent to Phillips et al. (2013) confirm the following distribution: California (Adesemoye et al. 2014, Chen et al. 2014b, Doll et al. 2015, Lynch et al. 2014), Italy (Pavlic-Zupanc et al. 2015, Dissanayake et al. 2016).

7.9. ***Dothiorella iranica*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 32: 4 (2014), MycoBank MB803988.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – Iran, Golestan Province, Gorgan (Agriculture Research Center), on twigs of *Olea europea* (*Oleaceae*), June 2007, A. Javadi (holotype IRAN 16253F, culture ex-type IRAN 1587C = CBS 124722).

Hosts – *Olea europea* (Abdollahzadeh et al. 2014), *Paliurus* sp. (Hyde et al. 2016)

Distribution – Iran (Abdollahzadeh et al. 2014), Italy (Hyde et al. 2016)

7.10. ***Dothiorella longicollis*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 859 (2008), MycoBank MB512053.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Tunnel Creek National Park, on healthy branches of *Lysiphyllum cunninghamii* (*Fabaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59485, culture ex-type CBS 122068).

Hosts – *Lysiphyllum cunninghamii*, *Terminalia* sp. (Pavlic et al. 2008)

Distribution – Australia (Pavlic et al. 2008).

7.11. ***Dothiorella moneti*** K. Taylor, Barber, G.E. Hardy & T.I. Burgess, *Mycol. Res.* 113: 342 (2009), MycoBank MB511825.

Sexual morph not reported. See Taylor et al. (2009) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Yalgorup National Park, from healthy stem of *Acacia rostellifera* (*Fabaceae*), Jun. 2005, K.M. Taylor (holotype PERTH 07692978, culture ex-type MUCC 505 = WAC 13154).

Host – *Acacia rostellifera* (Taylor et al. 2009).

Distribution – Australia (Taylor et al. (2009).

7.12. ***Dothiorella neclivorem*** W.M. Pitt & J.R. Úrbez-Torres, *Australas. Pl. Path*. 44: 49 (2015), MycoBank MB808287.

Sexual morph not reported. See Pitt et al. (2015) for illustrations and descriptions of asexual morph.

Type – Australia, Pokolbin, New South Wales, berries of Chardonnay, November 2008, N. Wunderlich (holotype DAR80992, culture ex-type DAR80992).

Host – *Vitis vinifera* (Pitt et al. 2015).

Distribution – Australia (Pitt et al. 2015).

7.13. ***Dothiorella oblonga*** F.J.J. Van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 163 (2014), MycoBank MB518719.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and descriptions of asexual morph.

Type – South Africa, Pretoria, Ditholo, *Acacia mellifera*, May 2006, F.J.J. van der Walt & R.N. Heath (holotype PREM 59628, culture ex-type CBS 121765); Ditholo, *A. mellifera* (paratype PREM 59629, culture ex-paratype CBS 121766). Namibia, Rundu, *A. mellifera*, Feb. 2006, F.J.J. van der Walt & J. Roux (paratype PREM 59627, culture ex-paratype CBS 121764).

Host – *Acacia mellifera* (Slippers et al. 2014).

Distribution – Namibia, South Africa (Slippers et al. 2014).

7.14. ***Dothiorella omnivora*** Linaldeddu, Deidda & Scanu, *Eur J Plant Pathol* 146: 272 (2016), MycoBank MB812898.

Sexual morph not reported. See Linaldeddu et al. (2016a) for illustrations and descriptions of asexual morph.

Type – Italy, Aritzo, on cankered branch of *Corylus avellana* (*Betulaceae*), 09 July 2008, B.T. Linaldeddu (holotype LISE 96304, culture extype CBS 140349).

Hosts – *Chamaecyparis lawsoniana*, *Corylus avellana*, *Fraxinus excelsior*, *Juglans regia*, *Ostrya carpinifolia*, *Thuja occidentalis*, *Vitis vinifera* (Linaldeddu et al. 2016a).

Distribution – Australia, Bosnia and Herzegovina, France, Iran, Italy, Serbia (Linaldeddu et al. 2016a).

7.15. ***Dothiorella parva*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 32: 5 (2014), MycoBank MB803989.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – Iran, Ardabil Province, Ardabil (Fandoghlo Forest Park), on twigs of *Corylus avellana*, July 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 14264F, culture ex-type IRAN 1579C = CBS 124720).

Hosts – *Corylus avellana* (Abdollahzadeh et al. 2014), *Ostrya carpinifolia* (Pavlic-Zupanc et al. 2015).

Distribution – Iran (Abdollahzadeh et al. 2014), Italy (Pavlic-Zupanc et al. 2015).

7.16. ***Dothiorella pretoriensis*** (Jami, Gryzenh., Slippers & M.J. Wingf.) Abdollahz. & A.J.L. Phillips, *Stud. Mycol.* 76: 108 (2013), MycoBank MB803995.

Sexual morph not reported. See Jami et al. (2012) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng, Pretoria, from wood of *Acacia karroo* (*Fabaceae*) with die-back symptoms, Nov. 2009, F. Jami (holotype PREM 60709, culture ex-type CBS 130404).

Host – *Acacia karroo* (Jami et al. 2012).

Distribution – South Africa (Jami et al. 2012).

7.17. ***Dothiorella prunicola*** A.J.L. Phillips & Abdollahz., *Persoonia* 32: 6 (2014), MycoBank MB803991.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – Portugal, Algarve Province, on twigs of *Prunus dulcis* (*Rosaceae*), June 2007, E. Diogo (holotype IRAN 16252F, culture ex-type IRAN 1541C = CBS 124723).

Host – *Prunus dulcis* (Abdollahzadeh et al. 2014).

Distribution – Portugal (Abdollahzadeh et al. 2014).

7.18. ***Dothiorella rhamni*** Wanasinghe, Bulgakov, E.B.G. Jones & K.D. Hyde, *Fungal Diversity* 78: (2016), Facesoffunginumber FoF01668.

Sexual morph not reported. See Li et al. (2016a) for illustrations and descriptions of asexual morph.

Type – Russia, Rostov region, Oktyabrsky District, near natural sanctuary "Persianovskaya steppe", Khoruli hollow, ravine grove (47.5006484° E, 40.1385927° N), on *Rhamnus cathartica* (*Rhamnaceae*), 26 April 2014, T.S. Bulgakov (holotype MFLU 15–3541, culture ex-type MFLUCC 14–0902).

Host – *Rhamnus cathartica* (Li et al. 2016a).

Distribution – Russia (Li et al. 2016a).

7.19. ***Dothiorella santali*** K. Taylor, Barber & T.I. Burgess, *Mycol. Res*. 113: 345 (2009), MycoBank MB511828.

Sexual morph not reported. See Taylor et al. (2009) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Yalgorup National Park, from healthy stem of *Santalum acuminatum* (*Santalaceae*), Jun. 2005, K.M. Taylor (holotype PERTH 07693028, culture ex-type MUCC 509 = WAC 13155).

Host – *Santalum acuminatum* (Taylor et al. 2009).

Distribution – Australia (Taylor et al. 2009).

7.20. ***Dothiorella sarmentorum*** (Fr.) A.J.L. Phillips, A. Alves & J. Luque, *Mycologia* 97: 522 (2005), MycoBank MB501403.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – England, Warwickshire, on *Ulmus* sp. (*Ulmaceae*), Aug. 1956, E.A. Ellis, (holotype and culture ex-type IMI 63581b [as *Otthia spiraeae*]).

Hosts – Plurivorous. See Dissanayake et al. (2016) for host details (identifications are supported by molecular data of post-2005).

Distribution – Worldwide, See Dissanayake et al. (2016) for distribution of *D. sarmentorum*.

7.21. ***Dothiorella sempervirentis*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 32: 6 (2014), MycoBank MB803987.

Sexual morph not reported. See (Abdollahzadeh et al. 2014) for illustrations and descriptions of asexual morph.

Type – Iran, Golestan Province, Gorgan (City Park), on twigs and cones of *Cupressus sempervirens* (*Cupressaceae*), Aug. 2006, M.A. Aghajani (holotype IRAN 14265F, culture ex-type IRAN 1583C = CBS 124718).

Host – *Cupressus sempervirens* (Abdollahzadeh et al. 2014).

Distribution – Iran (Abdollahzadeh et al. 2014).

7.22. ***Dothiorella striata*** A.J.L. Phillips & Abdollahz., *Persoonia* 32: 7 (2014), MycoBank MB803990.

Sexual morph not reported. See (Abdollahzadeh et al. 2014) for illustrations and descriptions of asexual morph.

Type – New Zealand, Northland, Kerikeri, Collins Orchard, Inlet Road, on twigs of *Citrus sinensis* (*Rutaceae*), Sept. 2006, S.R. Pennycook, P.R. Johnston & B.C. Paulus (holotype PDD 92029, culture ex-type ICMP 16824 = CBS 124731).

Host – *Citrus sinensis* (Abdollahzadeh et al. 2014).

Distribution – New Zealand (Abdollahzadeh et al. 2014).

7.23. ***Dothiorella symphoricarposicola*** W.J. Li, J.K. Liu & K.D. Hyde, *Cryptogamie Mycologie*, 35: 257 (2014), Facesoffunginumber FOF000024.

Sexual morph not reported. See (Li et al. 2014) for illustrations and descriptions of asexual morph.

Type – Italy, Forlì-Cesena [FC], Berleta-Santa Sofia, on dead bark of *Symphoricarpos* sp. (*Caprifoliaceae*), 18 May 2013, Erio Camporesi, IT-1075 (holotype MFLU 14-0217, cultures ex-type MFLUCC 13-0497 and MFLUCC 13-0498); Spinello-Santa Sofia, on dead bark of *Symphoricarpos* sp., 28 June 2013, Erio Camporesi IT-1075A (paratype MFLU 14-0297.

Hosts – *Laburnum alpinum*, *Laurus nobilis*, *Sambucus nigra*, *Symphoricarpos* sp. (Li et al. 2014, Dissanayake et al. 2016).

Distribution – Italy (Li et al. 2014, Dissanayake et al. 2016).

7.24. ***Dothiorella tectonae*** Doilom, L.A. Shuttleworth, & K.D. Hyde, *Phytotaxa* 233: 001 (2015), Facesoffunginumber FoF00165.

Sexual morph not reported. See Doilom et al. (2015) for illustrations and descriptions of asexual morph.

Type – Thailand, Phayao Province, Muang District, on dead branch of *Tectona grandis* (*Lamiaceae*), 12 March 2012, M. Doilom (holotype MFLU 14-0272, culture ex-type MFLUCC 12-0382, MUCL 55409).

Host – *Tectona grandis* (Doilom et al. 2015).

Distribution – Thailand (Doilom et al. 2015).

7.25. ***Dothiorella thailandica*** Abdollahz., A.J.L. Phillips & A. Alves, *Stud. Mycol.* 76: 110 (2013), MycoBank MB805461.

Sexual morph not reported. See Liu et al. (2012) for illustrations and descriptions of asexual morph.

Type – Thailand, Chiang Rai Province, Doi Pui, on dead bamboo culm (*Poaceae*), 1 Sep. 2011, D.Q. Dai (holotype MFLU 12–0751, culture ex-type MFLUCC 11-0438 = CBS 133991).

Host – Bamboo (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

7.26. ***Dothiorella thripsita*** R.G. Shivas & D.J. Tree, *Persoonia* 22: 169 (2009), MycoBank MB513166.

Sexual morph not reported. See Shivas et al. (2009) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, Tallegalla, on dead stems and phyllodes of *Acacia harpophylla* (*Fabaceae*), Mar. 2008, D.J. Tree & C.E.C. Tree (holotype BRIP 51876, culture ex-type BRIP 51876).

Host – *Acacia harpophylla* (Shivas et al. 2009).

Distribution – Australia (Shivas et al. 2009).

7.27. ***Dothiorella ulmacea*** Crous & R.K. Schumach., *Sydowia* 67: 100 (2015), MycoBank MB812527.

Sexual morph not reported. See Crous et al. (2015b) for illustrations and descriptions of asexual morph.

Type – Germany, on a twig of *Ulmus laevis* (*Ulmaceae*), 1 Mar. 2014, leg. R. K. Schumacher (holotype CBS H-22257, culture ex-type CBS 138855); other specimen and culture on twigs of *Ulmus laevis*, 9 July 2014, leg. R. K. Schumacher (CBS H-22282, culture CPC 24945 = CBS 140005).

Host – *Ulmus leavis* (Crous et al. 2015b).

Distribution – Germany (Crous et al. 2015b).

7.28. ***Dothiorella uruguayensis*** (C.A. Pérez, Blanchette, Slippers & M.J. Wingf.) Abdollahz. & A.J.L. Phillips, *Stud. Mycol.* 76: 110 (2013), MycoBank MB803999.

Sexual morph not reported. See Pérez et al. (2010) for illustrations and descriptions of asexual morph.

Type – Uruguay, Paysandu, Tres Bocas, endophytic on twigs of *Hexachlamis edulis*, Aug. 2006, C.A. Pérez (holotype PREM 60268, culture ex-type CBS 124908).

Host – *Hexachlamis edulis* (Pérez et al. 2010).

Distribution – Uruguay (Pérez et al. 2010).

7.29. ***Dothiorella vidmadera*** W.M. Pitt, Úrbez-Torres & Trouillas, *Fungal Diversity* Res. Ser. 61: 216 (2013), MycoBank MB803533.

Sexual morph and asexual morph reported. See Pitt et al. (2013b) for illustrations and descriptions of asexual morph and Li et al. (2016a) for illustrations and descriptions of sexual morph.

Type – Australia, EdenValley, South Australia, *Vitis vinifera* (*Vitaceae*) W.M. Pitt & A. Loschiavo, (holotype DAR78992, culture ex-type DAR78992).

Hosts – *Fraxinus ornus* (Li et al. 2016a), *Robinia pseudoacacia* (Hyde et al. 2016), *Vitis vinifera* (Pitt et al. 2013b).

Distribution – Australia (Pitt et al. 2013b), Italy (Li et al. 2016a), Russia (Hyde et al. 2016).

7.30. ***Dothiorella vinea-gemmae*** W.M. Pitt & J.R. Úrbez-Torres, *Australas. Pl. Path.* 44: 51 (2015), MycoBank MB808288.

Sexual morph not reported. See Pitt et al. (2015) for illustrations and descriptions of asexual morph.

Type – Australia, Pokolbin, New South Wales, *Vitis vinifera* (*Vitaceae*), November 2008, N. Wunderlich (holotype, DAR81012, culture ex-type, DAR81012).

Host – *Vitis vinifera* (Pitt et al. 2015).

Distribution – Australia (Pitt et al. 2015).

8. ***Endomelanconiopsis*** E.I. Rojas & Samuels, *Mycologia* 100: 770 (2008), MycoBank MB511837. *Endomelanconiopsis* comprises only two species and only the asexual morph has been reported within the genus.

Type species – *Endomelanconiopsis endophytica* E.I. Rojas & Samuels 2008.

8.1. ***Endomelanconiopsis endophytica*** E.I. Rojas & Samuels, *Mycologia* 100: 770 (2008), MycoBank MB511838.

Sexual morph not reported. See Rojas et al. (2008) for illustrations and descriptions of asexual morph.

Type – Panama, Nombre de Dios, isolated from leaves of *Theobroma cacao* (*Malvaceae*), 2000, E. Rojas, L. Mejía & Z. Maynard (holotype BPI 878370, culture ex-type CBS 120379).

Hosts – *Carapa guianensis* (Ferreira et al. 2015), *Heisteria concinna*, *Theobroma cacao* (Rojas et al. 2008)

Distribution – Brazil (Ferreira et al. 2015), Panama (Rojas et al. 2008).

8.2. ***Endomelanconiopsis microspora*** (Verkley & Aa) E.I. Rojas & Samuels, *Mycologia* 100: 770 (2008), MycoBank MB511839.

Sexual morph not reported. See Verkley & van der Aa (1997) for illustrations and descriptions of asexual morph.

Type – Papua New Guinea, Central Province, 22 km E of Port Moresby, Varirata National Park near Varirata Lookout, soil in dry secondary forest with *Casuarina* and *Eucalyptus*, and conglomerate rock outcrops, 23 Oct. 1995, A. Aptroot, H.A. van der Aa (holotype CBS H-12183, culture ex-type CBS 353.97).

Substrate – Soil (Verkley & van der Aa 1997).

Distribution – Papua New Guinea (Verkley & van der Aa 1997).

9. ***Eutiarosporella*** Crous, *Phytotaxa* 202: 85 (2015), MycoBank MB811248

This genus was introduced for tiarosporella-like fungi with long conidiomatal necks and holoblastic conidiogenesis (Crous et al. 2015a). The genus comprises seven species. Both sexual morph and asexual morph have been reported within the genus.

Type species – *Eutiarosporella tritici* (B. Sutton & Marasas) Crous 2015.

9.1. ***Eutiarosporella africana*** (Jami, Gryzenh., Slippers & M.J. Wingf.) Crous, *Phytotaxa* 202: 85 (2015), MycoBank MB811249.

Sexual morph not reported. See Jami et al. (2014) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from healthy wood section of *Celtis africana* (*Cannabaceae*), Nov. 2011, F. Jami & M. Gryzenhout (holotype PREM 60866, culture ex-type CBS 133854).

Host – *Celtis Africana* (Jami et al. 2014).

Distribution – South Africa (Jami et al. (2014).

9.2. ***Eutiarosporella dactylidis*** (Thambug., Camporesi & K.D. Hyde) Dissanayake, Camporesi & K.D. Hyde, *Fungal Diversity* 78: (2016), Facesoffunginumber FoF00334

Sexual morph and asexual morph reported. See Thambugala et al. (2014) for illustrations and descriptions.

Type – Italy, Teodorano – Meldola (province of Forlì-Cesena [FC]), on dead leaves of *Dactylis glomerata* (*Poaceae*), 15 December 2012, Erio Camporesi (holotype MFLU 14-0580, cultures ex-type MFLUCC 13-0276 = ICMP 20383).

Hosts – *Arrhenatherum eliatus*, *Dactylis glomerata* (Thambugala et al. 2014), *Avenella flexuosa* (Li et al. 2016a)

Distribution – Italy (Thambugala et al. 2014, Li et al. 2016a).

9.3. ***Eutiarosporella darliae*** E. Thynne, M.C. McDonald, M. Evans, H. Wallwork, S. Neate & P.S. Solomon, *Australas. Pl. Path.* 44: 533 (2015), MycoBank MB811116.

Sexual morph not reported. See Thynne et al. (2015) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, isolated from *Triticum aestivum* (*Poaceae*), 2012, QLD DPI, (holotype and culture ex-type DAR 82491).

Host – *Triticum aestivum* (Thynne et al. 2015).

Distribution – Australia (Thynne et al. 2015).

9.4. ***Eutiarosporella pseudodarliae*** E. Thynne, M.C. McDonald, M. Evans, H. Wallwork, S. Neate & P.S. Solomon, *Australas. Pl. Path.* 44: 534 (2015), MycoBank MB 811117.

Sexual morph not reported. See Thynne et al. (2015) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, isolated from *Triticum aestivum* (*Poaceae*), 2011, QLD DPI (holotype and culture ex-type DAR 82489).

Host – *Triticum aestivum* (Thynne et al. 2015).

Distribution – Australia (Thynne et al. 2015).

9.5. ***Eutiarosporella tritici*** (B. Sutton & Marasas) Crous, *Phytotaxa* 202: 85 (2015), MycoBank MB811250.

Sexual morph not reported. See (Crous et al. 2006) for illustrations and descriptions of asexual morph.

Type – South Africa: Free State Province: Heilbron, on *Triticum aestivum* (*Poaceae*), 18 Jan. 1973, W.F.O. Marasas (holotype PREM 44966, isotype IMI 186786, culture ex-type CBS 118719).

Host – *Triticum aestivum* (Sutton & Marasas 1976).

Distribution – South Africa (Sutton & Marasas 1976).

9.6. ***Eutiarosporella tritici-australis*** E. Thynne, M.C. McDonald, M. Evans, H. Wallwork, S. Neate & P.S. Solomon, *Australas. Pl. Path.* 44: 532 (2015), MycoBank MB 811115.

Sexual morph not reported. See Thynne et al. (2015) for illustrations and descriptions of asexual morph. In our families tree (Fig. 1) *Eutiarosporella tritici-australis* appears to be more closely related to the genus *Mucoharknessia*. Based on ITS sequence comparison, Thynne et al. (2015) noted that some of their isolates cluster with *M. cortaderiae*. However, the morphological description of *M. cortaderiae* is in contrast with the isolates obtained from white grain disorder of wheat (Thynne et al. 2015). On account of their morphology, Thynne et al. (2015) concluded that the white grain disorder isolates reside in *Eutiarosporella* and not *Mucoharknessia*. Subsequently, Li et al. (2016a) introduced a new species in *Mucoharknessia*; *M. anthoxanthii* with morphology similar to *Eutiarosporella*. For these reasons, we consider that the position of *E. tritici-australis* in *Eutiarosporella* is tenable and needs to be re-assessed.

Type – Australia, South Australia, isolated from *Triticum aestivum* (*Poaceae*), 2012, SARDI (holotype and culture ex-type DAR 82485).

Host – *Triticum aestivum* (Thynne et al. 2015).

Distribution – Australia (Thynne et al. 2015).

9.7. ***Eutiarosporella urbis-rosarum*** (Jami, Gryzenh., Slippers & M.J. Wingf.) Crous, *Phytotaxa* 202: 85 (2015), MycoBank MB811251.

Sexual morph not reported. See Jami et al. (2012) for illustrations and descriptions of asexual morph.

Type – South Africa: Free State Province, Bloemfontein, healthy wood of *Vachellia karroo* (Fabaceae), June 2008, M. Gryzenhout (holotype PREM 60698, culture ex-type CBS 130405).

Host – *Vachellia karroo* (Jami et al. 2012).

Distribution – South Africa (Jami et al. 2012).

10. ***Lasiodiplodia*** Ellis & Everh., *Bot. Gaz.* 21: 92 (1896), MycoBank MB8708.
This genus comprises 31 species (Fig. 5). Both sexual asexual morph have been reported within the genus. Phillips et al. (2013) and Slippers et al. (2014) have shown that morphology is not a reliable character for species differentiation and species can be recognized only from combined ITS and *tef1-α* sequence data. Cruywagen et al. (2016) suggest that hybridization between *Lasiodiplodia* species is widespread and further suggest that some of the currently recognized species may in fact be hybrids, e.g. *L. viticola*, *L. missouriana*, *L. laeliocattletae* and *L. brasiliense*. Nevertheless, in the following list they are treated as distinct species until hybridization is confirmed.

Type species – *Lasiodiplodia theobromae* (Pat.) Griff. & Maubl., Bull. trimest. Soc. Mycol. Fr. 25: 57. 1909.

10.1. ***Lasiodiplodia avicenniae*** J.A. Osorio, Jol. Roux & Z.W. de Beer, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.004, 2016), MycoBank MB812010.

Sexual morph not reported. See Osorio et al. (2016) for illustrations and description of asexual morph.

Type – South Africa, Kwazulu-Natal Province, Beachwood and Isipingo, from asymptomatic branches of *Avicennia marina* (*Acanthaceae*), J.A Osorio & Jol. Roux (holotype PREM 61249, cultures ex-type CBS 139670).

Host – *Avicennia marina* (Osorio et al. 2016).

Distribution – South Africa (Osorio et al. 2016).

10.2. ***Lasiodiplodia brasiliense*** M.S.B. Netto, M.W. Marques & A.J.L. Phillips, *Fungal Diversity* 67: 134 (2014), MycoBank MB807525.

Sexual morph not reported. See Netto et al. (2014) for illustrations and descriptions of asexual morph.

Type – Brazil, Pernambuco, Farm Dan, on *Mangifera indica* stems (*Anacardiaceae*), 2010, M.W. Marques (holotype URM 85580, ex-type CMM4015 = URM7118).

Hosts – *Carica papaya*, *Mangifera indica* (Netto et al. 2014), *Cocos nucifera* (Rosado et al. 2016), *Tectona grandis* (Doilom et al. 2015), *Vitis vinifera* (Correia et al. 2016a).

Distribution – Brazil (Netto et al. 2014, Correia et al. 2016a, Rosado et al. 2016), Thailand (Doilom et al. 2015).

10.3. ***Lasiodiplodia bruguierae*** J.A. Osorio, Jol. Roux & Z.W. de Beer, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.004, 2016), MycoBank MB812011.

Sexual morph not reported. See Osorio et al. (2016) for illustrations and descriptions.

Type – South Africa, Kwazulu-Natal Province, Mlalazi Nature Reserve, Mtunzini, from asymptomatic branches of *Bruguiera gymnorrhiza* (*Rhizophoraceae*), J.A Osorio & Jol. Roux (holotype PREM 61248, culture ex-type CBS 139669).

Host – *Bruguiera gymnorrhiza* (Osorio et al. 2016).

Distribution – South Africa (Osorio et al. 2016).

10.4. ***Lasiodiplodia caatinguensis*** I.B.L. Coutinho, F.C.O Freire, C.S. Lima & J.E. Cardoso, *Plant Pathology* (available online, Doi: 10.1111/ppa.12565, 2016), MycoBank MB815122.

Sexual morph not reported. See Coutinho et al. (2016) for illustrations and descriptions of asexual morph.

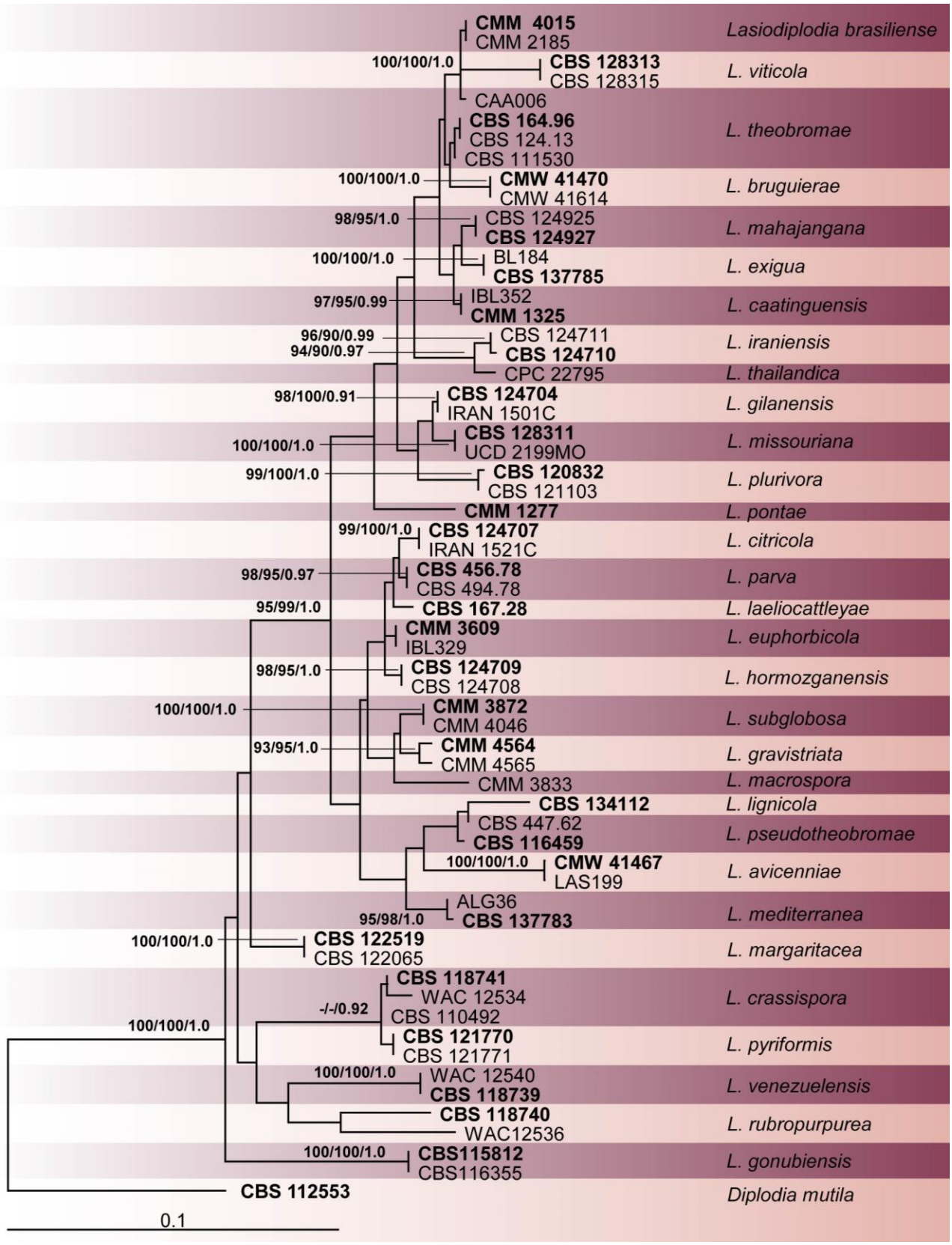


Fig. 5 – Phylogram generated from Maximum Likelihood analysis based on combined ITS and *tef1-α* dataset of *Lasiodiplodia*. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities above 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Diplodia mutila* (CBS 112553).

Type – Brazil, Itarema, Ceara, trunk canker of *Citrus sinensis* (*Rutaceae*), October of 2013, I. B. L. Coutinho & J. S. Lima (holotype VIC42498, culture ex-type CMM1325).

Host – *Citrus sinensis* (Coutinho et al. 2016).

Distribution – Brazil (Coutinho et al. 2016).

10.5. ***Lasiodiplodia citricola*** Abdollahz., Javadi & A.J.L. Phillips, *Persoonia* 25: 4 (2010), MycoBank MB16777.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Gilan Province, Chaboksar, on twigs of *Citrus* sp. (*Rutaceae*), Jun. 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 14270F, cultures ex-type IRAN 1522C = CBS 124707).

Hosts – *Citrus* sp. (Abdollahzadeh et al. 2010), *Juglans regia* (Chen et al. 2013a, 2014a), *Prunus persica* (Chen et al. 2013b), *Pistacia vera* (Chen et al. 2014b), *Vitis vinifera* (Carlucci et al. 2015).

Distribution – Iran (Abdollahzadeh et al. 2010), Italy (Carlucci et al. 2015), USA (California) (Chen et al. 2013a, b, 2014a, b).

10.6. ***Lasiodiplodia crassispora*** T.I. Burgess & Barber, *Mycologia* 98: 425 (2006), MycoBank MB500235.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Kununurra, from canker on *Santalum album* (*Santalaceae*), Dec. 2003, T.I. Burgess (holotype MURU 407, cultures ex-type WAC 12533 = CMW 14691).

Hosts – *Eucalyptus urophylla* (Pérez et al. 2010), *Mangifera indica* (Marques et al. 2013a), *Pterocarpus angolensis* (Mehl et al. 2011), *Santalum album* (Burgess et al. 2006), *Vitis vinifera* (Úrbez-Torres et al. 2010, van Niekerk et al. 2010, Correia et al. 2016a).

Distribution – Australia (Western Australia) (Burgess et al. 2006), Brazil (Marques et al. 2013a, Correia et al. 2016a), South Africa (van Niekerk et al. 2010, Mehl et al. 2011), Uruguay (Pérez et al. 2010), USA (California) (Úrbez-Torres et al. 2010).

10.7. ***Lasiodiplodia euphorbiicola*** A.R. Machado & O.L. Pereira, *Fungal Diversity* 67: 238 (2014), MycoBanK MB804872.

Synonym – ***Lasiodiplodia marypalmiae*** **(as *marypalme*)** Netto, M.W. Marques, A.J.L. Phillips & M.P.S. Câmara, *Fungal Diversity* 67: 136 (2014), MycoBank MB807526.

Sexual morph not reported. See Machado et al. (2014a) for illustrations and descriptions of asexual morph. Sequences of *L. euphorbicola* were not available to Netto et al. (2014) when they described *L. marypalmiae* as a new species. In the phylogenetic analysis of Machado et al. (2014a) the ex-type isolate of *L. marypalmiae* nested with the ex-type of *L. euphorbicola* in a well-supported clade and for this reason they considered them to be synonyms.

Type – Brazil, Colatina, Espírito Santo, collar and root rot of *Jatropha curcas* (*Euphorbiaceae*), 2011, A. R. Machado & O. L. Pereira, (holotype VIC39109, culture ex-type CMM3609).

Hosts – *Carica papaya* (Netto et al. 2014), *Jatropha curcas* (Machado et al. 2014a), *Manihot esculenta* (Machado et al. 2014b), *Vitis vinifera* (Correia et al. 2016a).

Distribution – Brazil (Machado et al. 2014a, b, Netto et al. 2014), Italy (Correia et al. 2016a).

10.8. ***Lasiodiplodia exigua*** Linaldeddu, Deidda & A.J.L. Phillips, *Fungal Diversity* 71: 207 (2015), MycoBank MB808355.

Synonym – ***Lasiodiplodia americana*** S.F. Chen, G.Q. Li & T.J. Michailides, *Mycologia* 107: 1 (2015), MycoBank MB810934.

Sexual morph not reported. See Linaldeddu et al. (2015) for illustrations and descriptions of asexual morph. Rodrígez-Galvéz et al. (2016) showed that *L. americana* and *L. exigua* are phylogenetically indistinguishable and since *L. exigua* is the older name it takes precedence.

Type – Tunisia, Nabeul, isolated from a branch canker of *Retama raetam* (*Fabaceae*), 27 June 2012, Benedetto T. Linaldeddu (holotype LISE 96302, culture ex-type CBS 137785).

Hosts – *Pistacia vera, Retama raetam* (Chen et al. 2015, Linaldeddu et al. 2015).

Distribution – Tunisia (Linaldeddu et al. 2015), USA (Chen et al. 2015).

10.9. ***Lasiodiplodia gilanensis*** Abdollahz., Javadi & A.J.L. Phillips, *Persoonia* 25: 5 (2010), MycoBank MB16778.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Gilan Province, Rahimabad-Garmabdost, on twigs of unknown woody plant, Jun. 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 14272F, cultures ex-type IRAN 1523C = CBS 124704).

Host – *Pistacia vera* (Chen et al. 2014b).

Distribution – Iran (Abdollahzadeh et al. 2010), USA (Chen et al. 2014b).

10.10. ***Lasiodiplodia gonubiensis*** Pavlic, Slippers & M.J. Wingf., *Stud. Mycol.* 50: 318 (2004), MycoBank MB500079.

Sexual morph and asexual morph have been reported. See Pavlic et al. (2004) for illustrations and descriptions of the asexual morph and Trakunyingcharoen et al. (2015a) for illustrations and descriptions of the sexual morph.

Type – South Africa, Eastern Cape Province, Gonubie, isolated from *Syzygium cordatum* (*Myrtaceae*), Jul. 2002, D. Pavlic (holotype PREM 58127, culture ex-type CBS 115812).

Hosts – *Phyllanthus emblica* (Trakunyingcharoen et al. 2015a), *Syzygium cordatum* (Pavlic et al. 2004, 2007).

Distribution – South Africa (Pavlic et al. 2004, 2007), Thailand (Trakunyingcharoen et al. 2015a).

10.11. ***Lasiodiplodia gravistriata*** M.S.B. Netto & M.P.S. Camara, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.07.006, 2016) MycoBank MB816925.

Sexual morph not reported. See Netto et al. (2016) for illustrations and descriptions of asexual morph.

Type – Brazil, Minas Gerais, Coracao de Jesus, on *Anacardium humile* stems (*Anacardiaceae*), 2013, M. S. B. Netto (holotype URM 89942, culture ex-type CMM 4564).

Host – *Anacardium humile* (Netto et al. 2016).

Distribution – Brazil (Netto et al. 2016).

10.12. ***Lasiodiplodia hormozganensis*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 25: 6 (2010), MycoBank MB16779.

Sexual morph not reported. See Abdollazadeh et al. (2010) and Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Hormozgan Province, Rodan, on twigs of *Olea* sp. (*Oleaceae*), Jun. 2007, J. Abdollahzadeh & A. Javadi holotype IRAN 14271F, cultures ex-type IRAN 1500C = CBS 124709).

Hosts – *Bougainvillea spectabilis* (Li et al. 2015), *Carica papaya* (Netto et al. 2014), *Mangifera indica* (Abdollahzadeh et al. 2010, Marques et al. 2013a, Al-sadi et al. 2013), *Olea* sp.

(Abdollahzadeh et al. 2010), *Phoenix dactylifera*, *Citrus* (Al-sadi et al. 2013, 2014), *Vitis vinifera* (Correia et al. 2016a).

Distribution – Brazil (Marques et al. 2013a, Netto et al. 2014), China (Li et al. 2015), Iran (Hormozgan Province) (Abdollahzadeh et al. 2010), Italy (Correia et al. 2016a), Oman (Al-sadi et al. 2014), UAE (Al-sadi et al. 2013).

10.13. ***Lasiodiplodia iraniensis*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 25: 8 (2010), MycoBank MB16780.

Synonym – ***Lasiodiplodia jatrophicola*** A.R. Machado & O.L. Pereira, *Fungal Diversity* 67: 239 (2014), MycoBank MB804869.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph. Machado et al. (2014a) considered *L. jatrophicola* as morphologically and phylogenetically distinct from *L. iraniensis*. However, as pointed out by Phillips et al. (2013), morphology is not a suitable character for distinguishing species in *Lasiodiplodia*. Rodrígez-Galvéz et al. (2016) showed that these two species cannot be separated on the basis of ITS and *tef1-α* sequence data.

Type – Iran, Hormozgan Province, Bandar Abbas, Geno mountain, on twigs of *Salvadora persica* (*Salvadoraceae*), Mar. 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 14268F, cultures ex-type IRAN 1520C = CBS 124710).

Hosts – *Caryota mitis* (Zhu et al. 2015), *Citrus* sp., *Eucalyptus* sp., *Jatropha curcas* (Machado et al. 2014a), *Juglans* sp., *Mangifera indica*, *Salvadora persica*, *Terminalia catapa* (Abdollahzadeh et al. 2010, Marques et al. 2013a, Sakalidis et al. 2011, Al-sadi et al. 2013, Li et al. 2015), *Vitis vinifera* (Correia et al. 2016a).

Distribution – Australia (Sakalidis et al. 2011), Brazil (Machado et al. 2014a, Marques et al. 2013a), China (Li et al. 2015, Zhu et al. 2015), Iran (Hormozgan & Golestan Provinces) (Abdollahzadeh et al. 2010), Italy (Correia et al. 2016a), UAE (Al-sadi et al. 2013).

10.14. ***Lasiodiplodia laeliocattleyae*** (Sibilia) A. Alves, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.06.004, 2016), MycoBank MB815697.

Basionym – *Diplodia cattleyae* Sibilia, *Boll. R. Staz. Patolog. Veget. Roma*, N.S. 7: 433 (1927). MycoBank MB268837.

Synonym – *Lasiodiplodia egyptiacae* A.M. Ismail et al., *Australas. Plant Path.* 41: 655 (2012), MycoBank MB564516.

Sexual morph not reported. See Rodrígez-Galvéz et al. (2016) for illustrations and description of the asexual morph. Rodrígez-Galvéz et al. (2016) revealed that *L. laeliocattleyae* is phylogenetically indistinguishable from *L. egyptiacae* and therefore they correspond to the same species.

Type – Italy, from living leaves and pseudobulbs of the cultivated orchid *Laeliocattleya*, 1927, C. Sibilia (holotype location not known, culture ex-type of *Diplodia laeliocattleyae* CBS 167.28).

Hosts – *Laeliocattleya*, *Mangifera indica* (Ismail et al. 2012, Marques et al. 2013), *Cocos nucifera* (Rosado et al. 2016).

Distribution – Brazil (Marques et al. 2013, Rosado et al. 2016), Egypt (Ismail et al. 2012), Italy, Peru (Rodrígez-Galvéz et al. 2016).

10.15. ***Lasiodiplodia lignicola*** (Ariyaw., J.K. Liu & K.D. Hyde) A.J.L. Phillips, A. Alves & Abdollahz., *Stud. Mycol.* 76: 120 (2013), MycoBank MB805462.

Basionym – *Auerswaldia lignicola* Ariyawansa, J.K. Liu & K.D. Hyde, *Fungal Diversity* 57: 161. 2012.

Sexual morph and asexual morph reported. See Liu et al. (2012) for illustrations and descriptions of sexual morph (as *Auerswaldia lignicola*) and Phillips et al. (2013) for illustrations and descriptions of asexual morph. In Phillips et al. (2013) and other phylogenetic studies, the phylogenetic position

of *L. lignicola* was unclear. Cruywagen et al. (2016) re-sequenced *tef1-α* of the ex-type strain and this sequence (KU887003) was used in the analyses in the present paper, which clearly places this species in *Lasiodilodia*.

Type – Thailand, Chiang Rai Province, Muang District, Bandu, on dead wood, 30 Sep. 2011, A.D. Ariyawansa (holotype MFLU 12–0750, cultures ex-type MFLUCC 11-0435 = CBS 134112).

Hosts – Dead wood of unknown host (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

10.16. ***Lasiodiplodia macrospora*** A.R. Machado & O.L. Pereira, *Fungal Diversity* 67: 240 (2014), MycoBanK MB804871.

Sexual morph not reported. See Machado et al. (2014a) for illustrations and descriptions of asexual morph.

Type – Brazil, Colatina, Espírito Santo, Collar and root rot of *Jatropha curcas* (*Euphorbiaceae*), 2011, A. R. Machado & O. L. Pereira (holotype VIC39111, culture ex-type CMM3833).

Host – *Jatropha curcas* (Machado et al. 2014a).

Distribution – Brazil (Machado et al. 2014a).

10.17. ***Lasiodiplodia mahajangana*** Begoude, Jol. Roux & Slippers, *Mycol. Progr.* 9: 110 (2010), MycoBank MB514012.

Sexual morph not reported. See Didier Begoude et al. (2010) for illustrations and descriptions of asexual morph.

Type – Madagascar, Mahajanga, isolated from healthy branches of *Terminalia catappa* (*Combretaceae*), Oct. 2007, J. Roux (holotype PREM 60288 holotype, culture ex-type CBS 124925).

Hosts – *Euphorbia ingens* (van der Linde et al. 2011), *Terminalia catappa* (Didier Begoude et al. 2010).

Distribution – Madagascar (Didier Begoude et al. 2010), South Africa (van der Linde et al. 2011).

10.18. ***Lasiodiplodia margaritacea*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 860 (2008), MycoBank MB512052.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Tunnel Creek Gorge, on *Adansonia gibbosa* (*Malvaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59844, culture ex-type CBS 122519).

Host – *Adansonia gibbosa* (Pavlic et al. 2008).

Distribution – Australia (Pavlic et al. 2008).

10.19. ***Lasiodiplodia mediterranea*** Linaldeddu, Deidda & Berraf-Tebbal, *Fungal Diversity* 71: 207 (2015), MycoBank MB808356.

Sexual morph not reported. See Linaldeddu et al. (2015) for illustrations and descriptions of asexual morph.

Type – Italy, Bortigiadas, isolated from a branch canker of *Quercus ilex* (*Fagaceae*), June 2004, Benedetto T. Linaldeddu (holotype LISE 96303, culture ex-type CBS 137783).

Hosts – *Citrus sinensis, Quercus ilex, Vitis vinifera* (Linaldeddu et al. 2015, Andolfi et al. 2016).

Distribution – Algeria, Italy (Linaldeddu et al. 2015, Andolfi et al. 2016).

10.20. ***Lasiodiplodia missouriana*** Úrb.-Torr., Peduto & Gubler, *Fungal Diversity* 55: 181 (2012), MycoBank MB519954.

Sexual morph not reported. See Úrbez-Torres et al. (2012) for illustrations and descriptions of asexual morph.

Type – USA, Saint James, on Vitis vinifera × V. labrusca hybrid cv. Catawba (*Vitaceae*), Jun. 2006, R.K. Striegler & G.M. Leavitt (holotype UCD2193MO, culture ex-type CBS 128311).

Host – *Vitis* sp. (Úrbez-Torres et al. 2012).

Distribution – USA (Úrbez-Torres et al. 2012).

10.21. ***Lasiodiplodia parva*** A.J.L. Phillips, A. Alves & Crous, *Fungal Diversity* 28: 9 (2008), MycoBank MB510942.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Colombia, Dep. Meta, Villavicencio, cassava field soil, 1978, O. Rangel (holotype CBS H-19915, culture ex-type CBS 456.78).

Hosts – Cassava-field soil, *Terminalia* sp. (Begoude et al. 2011), *Theobroma cacao* (Alves et al. 2008), *Vitis vinifera* (Correia et al. 2013).

Distribution – Colombia, Sri Lanka (Alves et al. 2008), Cameroon (Begoude et al. 2011), Brazil (Correia et al. 2013).

10.22. ***Lasiodiplodia plurivora*** Damm & Crous, *Mycologia* 99: 674 (2008), MycoBank MB501322.

Sexual morph not reported. See Damm et al. (2007) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Stellenbosch, from V-shaped necrotic lesion of *Prunus salicina* (*Rosaceae*), May 2004, U. Damm (holotype CBS H-19844, culture ex-type CBS 120832).

Hosts – *Prunus salicina*, *Vitis vinifera* (Damm et al. 2007).

Distribution – South Africa (Western Cape Province) (Damm et al. 2007).

10.23. ***Lasiodiplodia pontae*** F.C.O Freire, I.B.L Coutinho, C.S. Lima & J.E. Cardoso, *Plant Pathology* (available online, Doi: 10.1111/ppa.12565, 2016), MycoBank MB815121.

Sexual morph not reported. See Coutinho et al. (2016) for illustrations and descriptions of asexual morph.

Type – Brazil, Pio IX, Piaui, necrotic canker on *Spondias purpurea* (*Anacardiaceae*), October 2009, J. S. Lima & F. C. O. Freire (holotype VIC42947, culture ex-type CMM1277).

Host – *Spondias purpurea* (Coutinho et al. 2016).

Distribution – Brazil (Coutinho et al. 2016).

10.24. ***Lasiodiplodia pseudotheobromae*** A.J.L. Phillips, A. Alves & Crous, *Fungal Diversity* 28: 8 (2008), MycoBank MB510941.

Sexual morph reported by Tennakoon et al. (2016). Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Costa Rica, San Carlos, on *Gmelina arborea* (*Lamiaceae*), J. Carranza-Velazquez (holotype CBS H-19916, culture ex-type CBS 116459).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Acacia mangium, Citrus aurantium, Coffea sp., Gmelina arborea, Rosa* sp. (Alves et al. 2008, Castro-

Medina et al. 2014), *Bougainvillea spectabilis* (Li et al. 2015), *Carica papaya* (Netto et al. 2014), *Cocos nucifera* (Rosado et al. 2016), *Eucalyptus grandis* (Pillay et al. 2013), *Jatropha curcas* (Machado et al. 2014a), *Juglans regia* China (Li et al. 2016b), *Mangifera indica* (Sandoval-Sanchez et al. 2013, Marques et al. 2013a), *Manihot* esculenta Brazil (Machado et al. 2014b), *Persea americana*, *Hevea brasiliensis* (Trakunyingcharoen et al. 2015b), *Schizolobium parahyba* (Mehl et al. 2014), *Tectona grandis* (Doilom et al. 2015), *Vitis vinifera* (Correia et al. 2013, Correia et al. 2016a, Dissanayake et al. 2015a).

Distribution – Brazil (Marques et al. 2013a, Machado et al. 2014a, b, Correia et al. 2013, Netto et al. 2014, Rosado et al. 2016), China (Dissanayake et al. 2015a, Li et al. 2015, 2016), Costa Rica, Netherlands, Suriname, Zaire (Alves et al. 2008), Ecuador (Mehl et al. 2014), Italy (Correia et al. 2016a), Mexico (Sandoval-Sanchez et al. 2013), South Africa (Pillay et al. 2013), Thailand (Doilom et al. 2015, Trakunyingcharoen et al. 2015b), Venezuela (Castro-Medina et al. 2014).

10.25. ***Lasiodiplodia pyriformis*** F.J.J. Van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 163 (2014), MycoBank MB518722.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and descriptions of asexual morph.

Type – Namibia, Dordabis, from *Acacia mellifera* (*Fabaceae*), Feb. 2006, F.J.J. van der Walt & J. Roux (holotype PREM 59633, culture ex-type CBS 121770).

Host – *Acacia mellifera* (Slippers et al. 2014).

Distribution – Namibia (Slippers et al. 2014).

10.26. ***Lasiodiplodia rubropurpurea*** T.I. Burgess, Barber & Pegg, *Mycologia* 98: 431 (2006), MycoBank MB500236.

Sexual morph not reported. See Burgess et al. 2006) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, Tully, from canker on *Eucalyptus grandis* (*Myrtaceae*), May 2003, T.I. Burgess (holotype MURU 409, culture ex-type CBS 118740).

Host – *Eucalyptus grandis* (Burgess et al. 2006).

Distribution – Australia (Queensland) (Burgess et al. 2006).

10.27. ***Lasiodiplodia subglobosa*** A.R. Machado & O.L. Pereira, *Fungal Diversity* 67: 241 (2014), MycoBanK MB804870.

Sexual morph not reported. See Machado et al. (2014a) for illustrations and descriptions of asexual morph.

Type – Brazil, Jaíba, Minas Gerais, Collar and root rot of *Jatropha curcas* (*Euphorbiaceae*), 2011, A. R. Machado & O. L. Pereira (holotype VIC39112, culture ex-type CMM3872).

Hosts – *Carya illinoinensis* (Poletto et al. 2016), *Jatropha curcas* (Machado et al. 2014a).

Distribution – Brazil (Machado et al. 2014a, Poletto et al. 2016).

10.28. ***Lasiodiplodia thailandica*** T. Trakunyingcharoen, L. Lombard & Crous, *Persoonia* 34: 95 (2014), MycoBank MB810169.

Sexual morph not reported. See Trakunyingcharoen et al. (2015b) for illustrations and descriptions of asexual morph.

Type – Thailand, Chiang Mai province, on twigs of *Mangifera indica* (*Anacardiaceae*), May 2012, T. Trakunyingcharoen (holotype CBS-H 21933, culture ex-type CBS 138760).

Host – *Mangifera indica* (Trakunyingcharoen et al. 2015b).

Distribution – Thailand (Trakunyingcharoen et al. 2015b).

10.29. ***Lasiodiplodia theobromae*** (Pat.) Griffon & Maubl., *Bull. Soc. mycol*. Fr. 25: 57 (1909), MycoBank MB188476.

Sexual and asexual morph reported but the connection between the two morphs has not been proven conclusively (Phillips et al. 2013). See Phillips et al. (2013) for illustrations and descriptions.

Type – Ecuador, on *Theobroma cacao*, Lagerheim, holotype not found, and presumably lost. Papua New Guinea, Madang, Jais Aben, from unidentified fruit along coral reef coast, No. 1995, A. Aptroot (neotype CBS H-21411, culture ex-neotype CBS 164.96.

Hosts – Wide host range.

Distribution – Widely distributed in tropical and subtropical regions.

10.30. ***Lasiodiplodia venezuelensis*** T.I. Burgess, Barber & Mohali, *Mycologia* 98: 432 (2006), MycoBank MB500237.

Sexual morph not reported. See Burgess et al. (2006) for illustrations and descriptions of asexual morph.

Type – Venezuela, Estado Portuguesa, Acarigua, from wood of living *Acacia mangium* (*Fabaceae*), Oct. 2003, S. Mohali (holotype MURU 413, culture ex-type CBS 118739).

Host – *Acacia mangium* (Burgess et al. 2006).

Distribution – Venezuela (Burgess et al. 2006).

10.31. ***Lasiodiplodia viticola*** Úrb.-Torr., Peduto & Gubler, *Fungal Diversity* 55: 183 (2012), MycoBank MB519966.

Sexual morph not reported. See Úrbez-Torres et al. (2010) for illustrations and descriptions of asexual morph.

Type – USA, Arkansas, Altus, on interspecific hybrid grape Vignoles cv. Ravat 51R, D. Cartwright & W. D. Gubler (holotype UCD2553AR, cultures ex-type UCD2553AR = CBS 128313).

Host – *Vitis* hybrids (Úrbez-Torres et al. 2010).

Distribution – USA (Arkansas and Missouri) (Úrbez-Torres et al. 2010).

11. ***Macrophomina*** Petr., *Annls mycol*. 21: 314 (1923), MycoBank MB8814.
This genus comprises only one species. Sexual morph not reported.

Type species – *Macrophomina phaseolina* (Tassi) Goid., Annali Sper. agr. N.S. 1: 457. 1947.

11.1. ***Macrophomina phaseolina*** (Tassi) Goid., *Annali Sper. agr*, N.S. 1: 457 (1947), MycoBank MB300023.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Holotype apparently lost. Cultures: Niger, Vigna minima, M. Ndiaye, CPC 11052, 11070. Senegal, soil, M. Ndiaye, CPC 11079, 11085, 11106, 11108. Uganda, *Eucalyptus* sp. (*Myrtaceae*), Jan. 1925, CBS 162.25; Unknown, *Zea mays*, Jun. 1933, S.F. Ashby, CBS 227.33.

Host – Plurivorous.

Distribution – Cosmopolitan.

12. ***Marasasiomyces*** Crous, *Phytotaxa* 202: 86 (2015), MycoBank MB811252.
This genus was introduced to accommodate tiarosporella-like fungi and comprises only one species. Sexual morph not reported.

Type species – *Marasasiomyces karoo* (B. Sutton & Marasas) Crous 2015.

12.1. ***Marasasiomyces karoo*** (B. Sutton & Marasas) Crous, *Phytotaxa* 202: 86 (2015), MycoBank MB811253.

Sexual morph not reported. See Sutton & Marasas (1976) and Crous et al. 2006 for illustrations and descriptions of asexual morph.

Type – South Africa. Cape Province: Colesberg, on dead stems of *Eriocephalus* sp. (*Asteraceae*), Feb. 1971, W.F.O. Marasas (holotype PREM 44967, isotype IMI 186782, culture ex-type CBS 118718).

Hosts – *Eriocephalus* sp., *Nestlera* sp., *Tribulus terrestris* (Sutton & Marasas 1976).

Distribution – South Africa (Sutton & Marasas 1976).

13. ***Mucoharknessia*** Crous, R.M. Sánchez & Bianchin., *Phytotaxa* 202: 86 (2015), MycoBank MB811254.
This genus was introduced for species resembling *Harknessia* with conidia bearing mucoid appendages. *Mucoharknessia* comprises two species. Only the asexual morph has been reported within the genus.

Type species – *Mucoharknessia cortaderiae* Crous, R.M. Sánchez & Bianchin 2015.

13.1. ***Mucoharknessia cortaderiae*** Crous, R.M. Sánchez & Bianchin., *Phytotaxa* 202: 86 (2015), MycoBank MB811255.

Sexual morph not reported. See Crous et al. (2015a) for illustrations and descriptions of asexual morph.

Type – Argentina. Buenos Aires Province, Punta Alta, 38°47’27,6”S 62°6’48,6”W, on leaves of *Cortaderia selloana* (*Poaceae*), 29 Mar. 2011, F.E. Anderson (holotype BBB, isotype CBS H-21853, culture ex-isotype CBS 131032).

Host – *Cortaderia selloana* (Crous et al. 2015a).

Distribution – Argentina (Crous et al. 2015a).

13.2. ***Mucoharknessia anthoxanthii*** Dissanayake, Camporesi & K.D. Hyde, *Fungal Diversity* 78: 19 (2016), Facesoffungi number FoF01651.

Sexual morph not reported. See Li et al. (2016a) for illustrations and descriptions of asexual morph.

Type – Italy, Province of Forlì-Cesena [FC], Passo delle Forche - Galeata, on dead stem of *Anthoxanthum odoratum* (*Poaceae*), 24 November 2012, Erio Camporesi (holotype MFLU 15–3477, culture ex-type MFLUCC 15–0904).

Host – *Anthoxanthum odoratum* (Li et al. 2016a).

Distribution – Italy (Li et al. 2016a).

14. ***Neodeightonia*** C. Booth, *Mycol. Pap.* 119: 17 (1970), MycoBank MB3450.
This genus comprises six species. Both sexual and the asexual morphs have been reported within the genus.

Type species – *Neodeightonia subglobosa* Booth, in Punithalingam 1970.

14.1. ***Neodeightonia licuriensis*** A. R. Machado & O. L. Pereira, *Cryptog. Mycol*. 36: 121 (2015), MycoBank MB810662.

Sexual morph not reported. See Adamcik et al. (2015) for illustrations and descriptions of asexual morph.

Type – Brazil, along highway between the cities Castro Alves and Santa Terezinha, Bahia, on necrotic lesions on the rachis and leaves of *Syagrus coronata* (*Arecaceae*), 2010, O. L. Pereira, (holotype VIC42826, culture ex-type COAD1780).

Host – *Syagrus coronate* (Adamcik et al. 2015).

Distribution – Brazil (Adamcik et al. 2015).

14.2. ***Neodeightonia palmicola*** J.K. Liu, Phook. & K.D. Hyde, *Sydowia* 62: 268 (2010), MycoBank MB518804.

Sexual morph and asexual morph reported. See Liu et al. (2012) for illustrations and descriptions.

Type – Thailand, Chiang Rai, Muang District, Khun Korn Waterfall, on dead leaves of *Arenga westerhoutii* (*Arecaceae*), 18 Dec. 2009, Jian-Kui Liu (holotype MFLU10 0407, culture ex-type MFLUCC10 0822 = CBS 136074).

Host – *Arenga westerhoutii* (Liu et al. 2012).

Distribution – Thailand (Liu et al. 2012).

14.3. ***Neodeightonia phoenicum*** A.J.L. Phillips & Crous, *Persoonia* 21: 43 (2008), MycoBank MB511708.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Spain, Catalonia, Tarragona, Salou, on *Phoenix* sp. (*Arecaceae*), F. Garcia (holotype CBS H-20108, culture ex-type CBS 122528).

Host – *Phoenix* sp. (Phillips et al. 2008, Ligoxigakis et al. 2013).

Distribution – Spain, USA (California) (Phillips et al. 2008), Greece (Ligoxigakis et al. 2013).

14.4. ***Neodeightonia rattanica*** Konta & K.D. Hyde, *Mycosphere* 7: 953 (2016), Facesoffunginumber FoF02237.

Sexual morph and asexual morph reported. See Konta et al. (2016b) for illustrations and descriptions.

Type – Thailand, Phang-Nga, on dead rachis of *Calamus* sp. (*Arecaceae*), 6 December 2014, S. Konta (holotype MFLU 15-1443, culture ex-type MFLUCC 15-0712).

Host – *Calamus* sp. (Konta et al. 2016b).

Distribution – Thailand (Konta et al. 2016b).

14.5. ***Neodeightonia rattanicola*** Konta & K.D. Hyde, *Mycosphere* 7: 954 (2016), Facesoffunginumber FoF02238.

Sexual morph and asexual morph reported. See Konta et al. (2016b) for illustrations and descriptions.

Type – Thailand, Phang-Nga, on dead rachis of *Calamus* sp. (*Arecaceae*), 6 December 2014, S. Konta (holotype MFLU 15-0294, culture ex-type MFLUCC 15-0319).

Host – *Calamus* sp. (Konta et al. 2016b).

Distribution – Thailand (Konta et al. 2016b).

14.6. ***Neodeightonia subglobosa*** C. Booth, *Mycol. Pap.* 119: 19 (1970), MycoBank MB318601.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Sierra Leone, Njala (Kori), on dead culms of *Bambusa arundinacea* (*Poaceae*), 17 Aug. 1954, F.C. Deighton (holotype IMI 57769(f), culture ex-type CBS 448.91).

Host – *Bambusa arundinacea* (Punithalingam 1970).

Distribution – Sierra Leone (Punithalingam 1970).

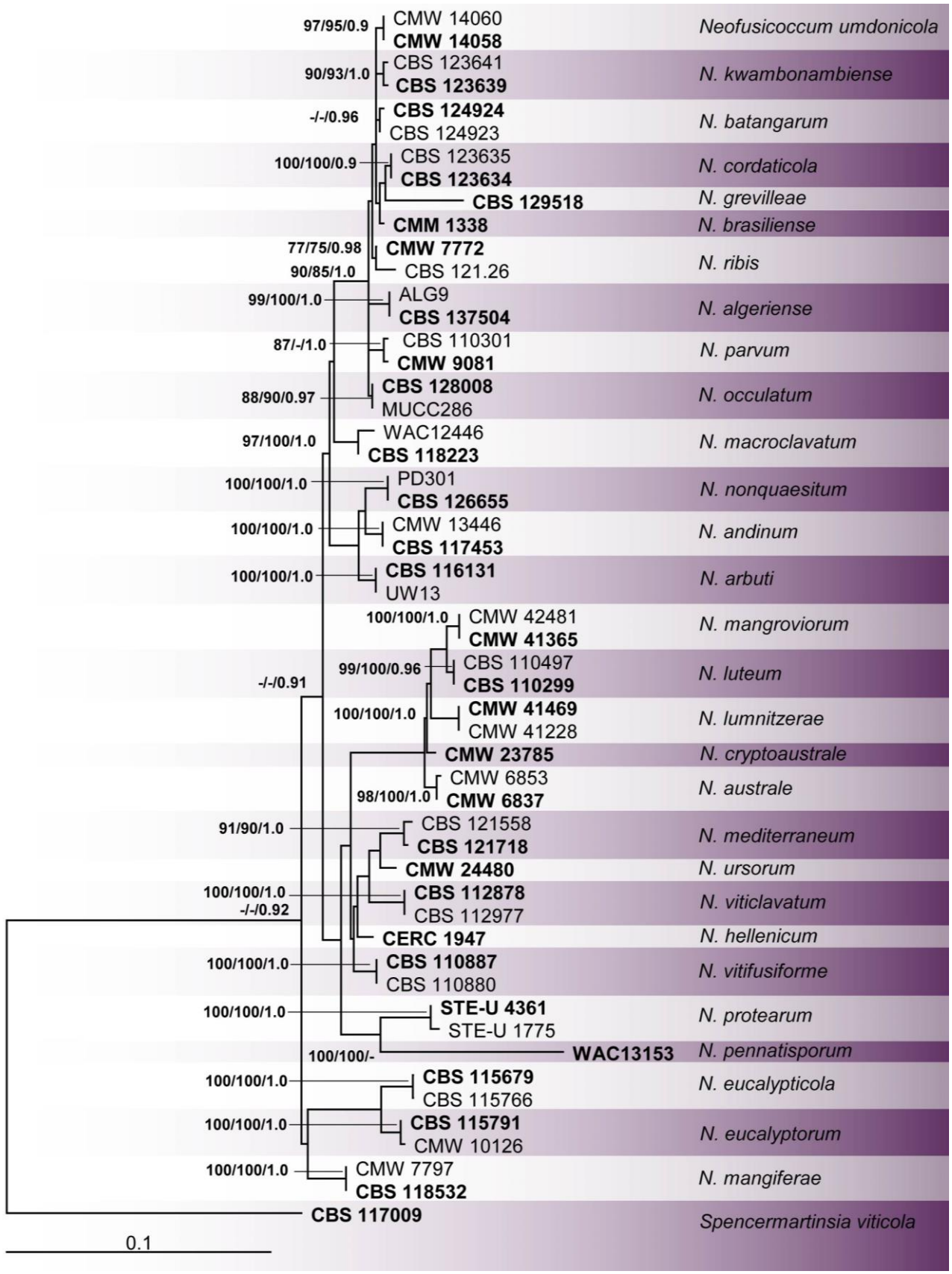


Fig. 6 – Phylogram generated from Maximum Likelihood analysis based on combined ITS and *tef1-α* dataset of *Neofusicoccum*. Bootstrap support values for maximum likelihood (ML), maximum parsimony (MP) greater than 75 % and Bayesian posterior probabilities greater than 0.90 are indicated near the nodes. The ex-type strains are in bold and the tree is rooted with *Spencermartinsia viticola* (CBS 117009).

15. ***Neofusicoccum*** Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 247 (2006), MycoBank MB500870.
This genus comprises 29 species (Fig. 6). Both sexual and asexual morphs have been reported within the genus.

Type species – *Neofusicoccum parvum* (Pennycook & Samuels) Crous, Slippers & A.J.L. Phillips, Stud. Mycol. 55: 248. 2006.

15.1. ***Neofusicoccum algeriense*** Berraf-Tebbal & A.J.L. Phillips, *Fungal Diversity* 53: 423 (2014), MycoBank MB808496.

Sexual morph not reported. See Berraf-Tebbal et al. (2014) for illustrations and descriptions of asexual morph. Lopes et al. (2016) consider this species as a synonym of *N. parvum*.

Type – Algeria. Ain-Benian, on trunks and branches of *Vitis vinifera* (*Vitaceae*), May 2013, A. Berraf-Tebbal (holotype LISE 9630, culture ex-type CBS 137504).

Host – *Vitis vinifera* (Berraf-Tebbal et al. 2014).

Distribution – Algeria (Berraf-Tebbal et al. 2014).

15.2. ***Neofusicoccum andinum*** (Mohali, Slippers & M.J. Wingf.) Mohali, Slippers & M.J. Wingf., *Stud. Mycol.* 55: 247 (2006), MycoBank MB500871.

Sexual morph not reported. See Mohali et al. (2006) for illustrations and descriptions of asexual morph.

Type – Venezuela, Mérida Morph, Merida, Mucuchies (3140 m), Cordillera of Los Andes, on branches of *Eucalyptus* sp. (*Myrtaceae*), Feb. 2003, S. Mohali (holotype PREM 58238, culture ex-type CBS 117453).

Host – *Eucalyptus* sp. (Mohali et al. 2006).

Distribution – Venezuela (Mohali et al. 2006).

15.3. ***Neofusicoccum arbuti*** (D.F. Farr & M. Elliott) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 248 (2006), MycoBank MB500872.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – USA, Washington, King Co., Seattle, Magnolia Bluffs, isolated from cankers of *Arbutus menziesii* (*Ericaceae*), Oct. 2003, collected by M. Elliott, isolated by A. Rossman (holotype BPI 843970, culture ex-type CBS 116131).

Hosts – *Arbutus menziesii* (Pacific madrone) (Farr et al. 2005, Mcgregor et al. 2016), *Vaccinium* sp. (Espinoza et al. 2009).

Distribution – USA, Canada (Farr et al. 2005), Chile (Espinoza et al. 2009), North America (Mcgregor et al. 2016).

15.4. ***Neofusicoccum australe*** (Slippers, Crous & M.J. Wingf.) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 248 (2006), MycoBank MB500873.
Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Australia, Victoria, Batemans Bay, *Acacia* sp. (*Fabaceae*), M.J. Wingfield (holotype PREM 57589, culture ex-type CMW 6837).

Hosts – *Acacia karroo* (Jami et al. 2015), *Eucalyptus grandis*, *Syzygium cordatum* (Pillay et al. 2013), *Mangifera indica* (Ismail et al. 2013), *Olea europaea* (Triki et al. 2015), *Pistacia vera* (Chen et al. 2014b), *Quercus robur* (Barradas et al. 2013), *Vaccinium* (Castillo et al. 2013), *Vitis vinifera* (Berraf-Tebbal et al. 2014, Pitt et al. 2013a, Valencia et al. 2015, Billones-Baaijens et al. 2015).

Distribution – Algeria (Berraf-Tebbal et al. 2014), Australia (Pitt et al. 2013a), Chile (Valencia et al. 2015), Italy (Ismail et al. 2013, New Zealand (Billones-Baaijens et al. 2015), Portugal (Barradas et al. 2013), South Africa (Jami et al. 2015), South Africa (Pillay et al. 2013), Spain (Castillo et al. 2013), Tunisia (Triki et al. 2015), USA (Chen et al. 2014b).

15.5. ***Neofusicoccum batangarum*** Begoude, Jol. Roux & Slippers, *Stud. Mycol.* 76: 137 (2013), MycoBank MB514013.

Sexual morph not reported. See Didier Begoude et al. (2010) for illustrations and descriptions of asexual morph.

Type – Cameroon, Kribi, Beach, isolated from healthy branches of *Terminalia catappa* (*Combretaceae*), Dec. 2007, D. Begoude & J. Roux, a dry culture on pine needles (holotype PREM 60285, culture ex-type CBS 124924).

Hosts – Prickly Pear Cactus (Conforto et al. 2016), *Schinus terebinthifolius* (Shetty et al. 2011), *Terminalia catappa* (Didier Begoude et al. 2010).

Distribution – Brazil (Conforto et al. 2016), Cameroon (Didier Begoude et al. 2010), USA (Shetty et al. 2011).

15.6. ***Neofusicoccum brasiliense*** M.W. Marques, A.J.L. Phillips & M.P.S. Câmara, sp. nov., MycoBank MB819515.

> **"*Neofusicoccum brasiliense*"** M.W. Marques, A.J.L. Phillips & M.P.S. Câmara, *Fungal Diversity* 61: 201 (2013), nom. inval.

Sexual morph not reported. Full description and diagnosis in Marques et al. (2013b).

Marques et al. (2013b) introduced *Neofusicoccum brasiliense* but did not designate a holotype and thus the name was invalid. To validate the name a suitable specimen has been deposited as follows.

Type – Brazil, Pernambuco, Petrolina, Lote 1195, on *Mangifera indica* stems (*Anacardiaceae*), 2010, M.W. Marques (holotype URM 89948, culture ex-type CMM1338).

Host – *Mangifera indica* (Marques et al. 2013b).

Distribution – Brazil (Marques et al. 2013b).

15.7. ***Neofusicoccum cordaticola*** Pavlic, Slippers & M.J. Wingf., *Mycologia* 100: 643 (2008), MycoBank MB512498.

Sexual morph not reported. See Pavlic et al. (2009) for illustrations and descriptions of asexual morph.

Type – South Africa, Kwazulu-Natal Province, Sodwana Bay, on symptomless branches and leaves, dying branches and pulp of ripe fruits of *Syzygium cordatum* (*Myrtaceae*), Mar. 2002, D. Pavlic, (holotype PREM 60066, culture ex-type CBS 123634).

Host – *Syzygium cordatum* (Pavlic et al. 2009).

Distribution – South Africa (Pavlic et al. 2009).

15.8. ***Neofusicoccum cryptoaustrale*** Pavlic, Maleme, Slippers & M.J. Wingf., *Persoonia* 31: 271 (2013), MycoBank MB512477.

Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from branches and leaves of living Eucalyptus trees (*Myrtaceae*), May 2005, H.M. Maleme (holotype PREM 59817, culture ex-type CBS 1122813); Gauteng Province, Eucalyptus trees, H.M. Maleme (paratype PREM 59818, culture ex-paratype CMW 20738, MycoBank MB512477).

Host – *Eucalyptus* sp. (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).

15.9. ***Neofusicoccum eucalypticola*** (Slippers, Crous & M.J. Wingf.) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 248, MycoBank MB500874.

Sexual morph and asexual morph reported. See Slippers et al. (2004b) for illustrations and descriptions.

Type – Australia, Victoria, Orbost, on *Eucalyptus grandis* (*Myrtaceae*), 2001, M.J. Wingfield (holotype PREM 57848, culture ex-type CBS 115679).

Host – *Eucalyptus* sp. (Slippers et al. 2004b, Burgess et al. 2006).

Distribution – Australia (Slippers et al. 2004b).

15.10. ***Neofusicoccum eucalyptorum*** (Crous, H. Sm. ter. & M.J. Wingf.) Crous, Slippers & A.J.L. Phillips, Stud. Mycol. 55: 248. 2006. MycoBank MB500875.

Sexual morph and asexual morph reported. See Smith et al. (2001) for illustrations and descriptions.

Type – of sexual morph: South Africa, Mpumalanga, Sabie, *Eucalyptus grandis*, 1995, H. Smith, holotype PREM 56603; of asexual morph: South Africa, Mpumalanga, Sabie, E. grandis, 1995, H. Smith, holotype PREM 56604. The ex-type isolate was not designated in the original publication and could not be traced. Slippers et al. (2004b) regarded CBS 115791 as representative.

Hosts – *Blepharocalyx salicifolius* (Pérez et al. 2010), *Eucalyptus* spp. (Burgess et al. 2006, Smith et al. 2001, Slippers et al. 2004b, Pérez et al. 2010, De la Mora-Castaneda et al. 2014), *Myrceugenia glaucescens*, *Myrrhinium atropurpureum* var. octandrum, *Syzygium cordatum* (Pillay et al. 2013).

Distribution – Australia (Slippers et al. 2004b), Mexico (De la Mora-Castaneda et al. 2014), South Africa (Smith et al. 2001, Pillay et al. 2013), Uraguay (Pérez et al. 2010).

15.11. ***Neofusicoccum grevilleae*** Crous & R.G. Shivas, *Persoonia* 26: 117 (2011), MycoBank MB560162.

Sexual morph not reported. See Crous et al. (2011) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, Brisbane, on leaves of *Grevillea aurea* (*Proteaceae*), 14 Jul. 2009, P.W. Crous & R.G. Shivas (holotype CBS H-20578, culture ex-type CBS 129518).

Host – *Grevillea aurea* (Crous et al. 2011).

Distribution – Australia (Crous et al. 2011).

15.12. ***Neofusicoccum hellenicum*** S.F. Chen, G.Q. Li & T.J. Michailides, *Mycologia* 107: 1 (2015), MycoBank MB810935.

Sexual morph not reported. See Crous et al. (2011) for illustrations and descriptions of asexual morph.

Type – Greece, Thessaloniki, from twigs of one *Pistacia vera* cultivar Aegina (*Anacardiaceae*), 23 Oct 1997, T.J. Michailides (holotype CSFF2010, culture ex-type CERC1947 = CFCC50067).

Host – *Pistacia vera* (Crous et al. 2011).

Distribution – Greece (Crous et al. 2011).

15.13. ***Neofusicoccum kwambonambiense*** Pavlic, Slippers & M.J. Wingf., *Mycologia* 100: 643 (2008), MycoBank MB512499.

Sexual morph not reported. See Pavlic et al. (2009) for illustrations and descriptions of asexual morph.

Type – South Africa, Kwazulu-Natal Province, Kwambonambi, on symptomless branches and leaves, dying branches and pulp of ripe fruits of *Syzygium cordatum* (*Myrtaceae*), Mar 2002, D. Pavlic (holotype PREM 60067, culture ex-type CBS 123639).

Hosts – *Acacia karroo*, *Celtis Africana* (Jami et al. 2014), *Eucalyptus grandis* (Pillay et al. 2013), *Fragaria ananassa* (Lopes et al. 2014), *Syzygium cordatum* (Pavlic et al. 2009, Pillay et al. 2013, Pavlic-Zupanc et al. 2015), *Vitis vinifera* (Abreo et al. 2013).

Distribution – Brazil (Lopes et al. 2014), South Africa (Pavlic et al. 2009, Pillay et al. 2013, Jami et al. 2014, Pavlic-Zupanc et al. 2015), Uruguay (Abreo et al. 2013).

15.14. ***Neofusicoccum lumnitzerae*** J.A. Osorio, Jol. Roux & Z.W. de Beer, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.004, 2016), MycoBank MB812012.

Sexual morph not reported. See Osorio et al. (2016) for illustrations and description.

Type – South Africa, Kwazulu-Natal Province: Kosi Bay, from asymptomatic branches of *Lumnitzera racemosa* (*Combretaceae*) J.A Osorio & Jol. Roux. (holotype PREM 61251, culture ex-type CBS 139674).

Host – *Lumnitzera racemosa* (Osorio et al. 2016).

Distribution – South Africa (Osorio et al. 2016).

15.15. ***Neofusicoccum luteum*** (Pennycook & Samuels) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 248 (2006), MycoBank MB500876.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – New Zealand, Bay of Plenty, Te Puke, No 1 Road, DSIR Research Orchard, from lesions on ripe fruit of *Actinidia deliciosa* (*Actinidiaceae*), 6 Oct. 1982, S.R. Pennycook (holotype PDD 45400, culture ex-type of asexual morph PDDCC 8004). Portugal, Estremadura, Oeiras, Quinta do Marquês, on cane of *Vitis vinifera* cv. Galego Dourado (*Vitaceae*), Mar. 1996, A.J.L. Phillips (holotype of sexual morph LISE 94070, culture ex-type CBS 110299).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Citrus* sp. (Adesemoye et al. 2014), *Erica arborea* (Linaldeddu et al. 2015), *Vitis vinifera* (Billones-Baaijens et al. 2015, Chebil et al. 2014).

Distribution – Recent studies subsequent to Phillips et al. (2013) confirm the following distribution: California (Adesemoye et al. 2014), Italy (Linaldeddu et al. 2015), New Zealand (Billones-Baaijens et al. 2015), Tunisia (Chebil et al. 2014).

15.16. ***Neofusicoccum macroclavatum*** (T.I. Burgess, Barber & G.E. Hardy) T.I. Burgess, Barber & G.E. Hardy, *Stud. Mycol.* 55: 248 (2006), MycoBank MB500877.

Sexual morph not reported. See Burgess et al. (2005) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Denmark, from wood of living *Eucalyptus globulus* (*Myrtaceae*), Oct. 2002, T.I. Burgess (holotype MURU 400, culture ex-type CBS 118223).

Hosts – *Eucalyptus globulus*, *E. saligna* (Burgess et al. 2005), *Vitis vinifera* (Billones-Baaijens et al. 2013).

Distribution – Australia (Burgess et al. 2005), New Zealand (Billones-Baaijens et al. 2013).

15.17. ***Neofusicoccum mangiferae*** (Syd. & P. Syd.) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 248 (2006), MycoBank MB500878.

Sexual morph not reported. See Slippers et al. (2005) for illustrations and descriptions of asexual morph.

Type – India, Lucknow, on *Mangifera indica* (*Anacardiaceae*), F. Bahadur (E.J. Butler 1724), 22 Oct. 1908 (holotype HCIO Cultures linked to the type could not be located and probably do not exist. Slippers et al. (2005) regarded the following as representatives: CBS 118531, CBS 118532.

Hosts – *Mangifera indica* (Slippers et al. 2005, Ni et al. 2012, Serrato-Diaz et al. 2014), *Vitis vinifera* (Dissanayake et al. 2015b).

Distribution – Australia, India (Slippers et al. 2005), China (Dissanayake et al. 2015b), Puerto Rico (Serrato-Diaz et al. 2014), Taiwan (Ni et al. 2012).

15.18. ***Neofusicoccum mangroviorum*** J.A. Osorio, Jol. Roux & Z.W. de Beer, *Fungal Biology* (available online, http://dx.doi.org/10.1016/j.funbio.2016.09.004, 2016), MycoBank MB814641.

Sexual morph not reported. See Osorio et al. (2016) for illustrations and description.

Type – South Africa, Kwazulu-Natal Province, Beachwood, Kosi Bay, Mtunzini, Mgazana, from asymptomatic branches of *Avicennia marina*, J.A Osorio & Jol. Roux (holotype PREM 61305, culture ex-type CBS 140738).

Host – *Avicennia marina, Bruguiera gymnorrhiza, Lumnitzera racemosa* and *Rhizophora mucronata* (Osorio et al. 2016).

Distribution – South Africa (Osorio et al. 2016).

15.19. ***Neofusicoccum mediterraneum*** Crous, M.J. Wingf. & A.J.L. Phillips, *Fungal Planet*, 19: 2 (2007), MycoBank MB504461.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Greece, Rhodes, Rhodos Palace Hotel parking lot, on branches and leaves of *Eucalyptus* sp., 12 Jun. 2006, collected by P.W. Crous, M.J. Wingfield & A.J.L. Phillips (holotype CBS H-19921, culture ex-type CBS 121718).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Vitis vinifera* (Berraf-Tebbal et al. 2014), *Diospyros kaki* (Palou et al. 2013), *Juglans regia* (Chen et al. 2014a), *Mangifera indica* (Krishnapillai & Wijeratnam 2015), *Olea europaea* (Úrbez-Torres et al. 2013), *Pistachia vera* (Michailides & Morgan 2016, Chen et al. 2014b).

Distribution – Recent studies subsequent to Phillips et al. (2013) confirm the following distribution: Algeria (Berraf-Tebbal et al. 2014), California (Chen et al. 2014a, b, Michailides & Morgan 2016, Úrbez-Torres et al. 2013), India (Krishnapillai et al. 2015), Spain (Palou et al. 2013).

15.20. ***Neofusicoccum nonquaesitum*** Inderb., Trouillas, Bostock & Michailides, *Mycologia* 102: 1360 (2010), MycoBank MB518135.

Sexual morph not reported. See Inderbitzin et al. (2010) for illustrations and descriptions of asexual morph.

Type – USA, California, Napa County, St Helena, on cankered branch of *Umbellularia californica* (*Lauraceae*), 12 Nov. 2004, F.P. Trouillas (holotype UC1946389, culture ex-type CBS 126655).

Hosts – *Malus domestica* (Rooney-Latham & Soriano 2016), *Sequoiadendron giganteum* (Rooney-Latham et al. 2012), *Umbellularia californica*, *Prunus dulcis* (Inderbitzin et al. 2010), *Vaccinium corymbosum* (Espinoza et al. 2009, Pérez et al. 2014).

Distribution – Chile (Espinoza et al. 2009, Pérez et al. 2014), North America (Rooney-Latham et al. 2012), USA (California) (Inderbitzin et al. 2010, Rooney-Latham & Soriano 2016).

15.21. ***Neofusicoccum occulatum*** Sakalidis & T.I. Burgess, *Mol. Phylogen. Evol.* 60: 340 (2011), MycoBank MB518777.

Sexual morph not reported. See Sakalidis et al. (2011) for illustrations and descriptions of asexual morph.

Type – Australia, Queensland, Karanda, symptomless branches of *Eucalyptus grandis* hybrid (*Myrtaceae*), Mar 2002, T.I. Burgess (holotype MURU467, culture ex-type CBS 128008).

Host – *Eucalyptus* (Sakalidis et al. 2011).

Distribution – Australia (Sakalidis et al. 2011).

15.22. ***Neofusicoccum parvum*** (Pennycook & Samuels) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol*. 55: 248 (2006), MycoBank MB500879.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – New Zealand, Bay of Plenty, Te Puke, No 3 Road, Baldwin Orchard, on small dead branch of *Populus nigra* (*Salicaceae*), 17 Dec. 1981, S.R. Pennycook (holotype PDD 45438, culture ex-type PDDCC 8003 = ATCC 58191).

Hosts – Plurivorous.

Distribution – Worldwide.

15.23. ***Neofusicoccum pennatisporum*** K. Taylor, Barber & T.I. Burgess, *Mycol. Res*. 113: 346 (2009), MycoBank MB511826.

Sexual morph and asexual morph reported. See Taylor et al. (2009) for illustrations and descriptions. Morphologically and phylogenetically this species is divergent and its position within *Neofusicoccum* needs to be re-evaluated.

Type – Australia, Western Australia, Yalgorup National Park, from healthy stem of *Allocasuarina fraseriana* (*Casuarinaceae*), Jun. 2005, K.M. Taylor, holotype PERTH 07693044. WAC 13153 = MUCC 510 (ex-type).

Host – *Allocasuarina fraseriana* (Taylor et al. 2009).

Distribution – Western Australia (Taylor et al. 2009).

15.24. ***Neofusicoccum protearum*** (Denman & Crous) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol.* 55: 249 (2006), MycoBank MB500880.

Sexual morph and asexual morph reported. See Denman et al. (2003) for illustrations and descriptions.

Type – Of sexual morph: South Africa, Western Cape, Porterville, Baanbreek Farm, on stems of *Protea magnifica* (*Proteaceae*), 27 Jul. 1997, S. Denman (holotype PREM 57329, cultures ex-type STE-U 4361 = CPC 4361).

Hosts – *Protea* sp., *Leucadendron* sp. (Denman et al. 2000, 2003, Marincowitz et al. 2008), *Santalum acuminatum* (Taylor et al. 2009).

Distribution – Australia, Portugal (continental and Madeira), South Africa, Spain (Tenerife), USA (Hawaii) (Denman et al. 2000, 2003, Marincowitz et al. 2008, Taylor et al. 2009).

15.25. ***Neofusicoccum ribis*** (Slippers, Crous & M.J. Wingf.) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol*. 55: 249 (2006), MycoBank MB500881.

Sexual morph and asexual morph reported. See Slippers et al. (2004b) for illustrations and descriptions.

Type – USA, New York, Geneva, on *Ribes vulgare*, 1911, J.G. Grossenbacher & B.M. Duggar (holotype CUP-A (F.Col. 3408), culture ex-type CBS 115475).

Hosts – More than 250 hosts are listed in Farr & Rossman (2016) but many of the reports were published before the concept of *N. ribis* was clarified by Slippers et al. (2004a) and thus are not reliable. Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Hevea brasiliensis* (Ngobisa et al. 2013), *Mallus domestica* (Jurick et al. 2013), *Psidium guajava* (Nogueira Junior et al. 2016).

Distribution – Brazil (Nogueira Junior et al. 2016), Malaysia (Ngobisa et al. 2013), Pennsylvania (Jurick et al. 2013).

15.26. ***Neofusicoccum umdonicola*** Pavlic, Slippers & M.J. Wingf., *Mycologia* 100: 644 (2008), MycoBank MB512500.

Sexual morph not reported. See Pavlic et al. (2009) for illustrations and descriptions of asexual morph.

Type – South Africa, Kwazulu-Natal Province, Kosi Bay from symptomless branches and leaves, dying branches and pulp of ripe fruits of *Syzygium cordatum* (*Myrtaceae*), Mar. 2002, D. Pavlic (holotype PREM 60068, culture ex-type CBS 123645).

Hosts – *Schizolobium parahyba* (Mehl et al. 2014), *Syzygium cordatum* (Pavlic et al. 2009, Pavlic-Zupanc et al. 2015).

Distribution – Ecuador (Mehl et al. 2014), South Africa (Pavlic et al. 2009).

15.27. ***Neofusicoccum ursorum*** Pavlic, Maleme, Slippers & M.J. Wingf., *Persoonia* 31: 271 (2013), MycoBank MB512478.

Sexual morph not reported. See Crous et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Gauteng Province, Pretoria, from branches and leaves of living Eucalyptus trees (*Myrtaceae*), May 2005, H.M. Maleme (holotype PREM 59815, culture ex-type CBS 122811).

Host – *Eucalyptus* sp. (Crous et al. 2013).

Distribution – South Africa (Crous et al. 2013).

15.28. ***Neofusicoccum viticlavatum*** (Van Niekerk & Crous) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol*. 55: 249 (2006), MycoBank MB500882.

Sexual morph not reported. See van Niekerk et al. (2004) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Stellenbosch, on *V. vinifera* (*Vitaceae*), 2002, F. Halleen (holotype CBS H-7755, culture ex-type CBS 112878).

Host – *Vitis vinifera* (van Niekerk et al. 2004).

Distribution – South Africa (Western Cape Province) (van Niekerk et al. 2004).

15.29. ***Neofusicoccum vitifusiforme*** (Van Niekerk & Crous) Crous, Slippers & A.J.L. Phillips, *Stud. Mycol*. 55: 249 (2006), MycoBank MB500883.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Stellenbosch, on *V. vinifera* (*Vitaceae*), 2002, J.M. van Niekerk (holotype CBS H-7756, culture ex-type CBS 110887).

Hosts – *Acacia karroo* (Jami et al. 2013), *Eucalyptus corticosa* (as *N. corticosae*) (Summerell et al. 2006), *Eucalyptus* sp., *Eucalyptus camaldulensis*, *Eucalyptus diversicolor*, *E. pauciflora*,

Eucalyptus marginata, Eucalyptus rubida, Eucalyptus viminalis (as *D. eucalypti*) (Barber et al. 2005, Taylor et al. 2009, Sutton 1980), *Juglans regia* (Chen et al. 2014a), *Olea europaea* (Lazzizera et al. 2008, Úrbez-Torres et al. 2013), *Pistachia vera* (Chen et al. 2014b), *Prunus armeniaca, Prunus persica, Prunus salicina* (Damm et al. 2007), *Schizolobium parahyba* (Mehl et al. 2014), *Vaccinium corymbosum* (Kong et al. 2010), *Vitis vinifera* (van Niekerk et al. 2004, Úrbez-Torres et al. 2012, Mondello et al. 2013).

Distribution – Australia (Sutton 1980, Barber et al. 2005, Summerell et al. 2006, Taylor et al. 2009), China (Kong et al. 2010), Italy (Lazzizera et al. 2008, Mondello et al. 2013), South Africa (van Niekerk et al. 2004, Damm et al. 2007, Jami et al. 2013, Mehl et al. 2014), USA (Úrbez-Torres et al. 2012, 2013, Chen et al. 2014a, b).

16. ***Neoscytalidium*** Crous & Slippers, *Stud. Mycol*. 55: 244. 2006, MycoBank MB500868.
This genus comprises three species. The sexual morph has not been reported for any species.

Type species – *Neoscytalidium dimidiatum* (Penz.) Crous & Slippers.

Phillips et al. (2013) incorrectly stated that *N. hyalinum* is the type species of *Neoscytalidium*. The oldest epithet is *dimidiatum* based on *Torula dimidiata* (1882). Huang et al. (2016) corrected this error and placed *N. dimidiatum* as type species of the genus.

16.1. ***Neoscytalidium dimidiatum*** (Penz.) Crous & Slippers, *Stud. Mycol.* 55: 244 (2006), MycoBank MB500869.

Basionym – *Torula dimidiata* Penz., Michelia 2: 466. 1882 (basionym; hyphomycete synanamorph).

Synonym – *Neoscytalidium hyalinum* (C. K. Campb. & J. L. Mulder) AJL Phillips, Groenewald & Crous, SIM 76: 148 (2013). See Huang et al. (2016).

Sexual morph not reported. See Crous et al. (2006) for illustrations and description of asexual morph.

Type – Holotype of basionym apparently lost. Since *N. hyalinum* and *N. dimidiatum* are considered to be synonyms, the isotype and ex-isotype culture of *N. hyalinum* have been used as the standard for this species. Lectotype: United Kingdom, sole of human foot, 20 Nov. 1973, C.K. Campbell (isotype CBS H-7745, culture ex-isotype CBS 145.78).

Hosts – Recent studies subsequent to Phillips et al. (2013) confirm the following hosts: *Jatropha curcas* (Machado et al. 2014a), *Manihot esculenta* (Machado et al. 2014b), *Vitis vinifera* (Correia et al. 2016b).

Distribution – Recent studies subsequent to Phillips et al. (2013) confirm the following distribution: Brazil (Machado et al. 2014a, b, Correia et al. 2016b).

16.2. ***Neoscytalidium novaehollandiae*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 862 (2008), MycoBank MB512103.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Bell Gorge, on *Crotalaria medicaginea* (*Fabaceae*), Jul. 2006, T.I. Burgess (holotype PREM 60069, culture ex-type CBS 122071).

Hosts – *Acacia synchronica, Adansonia gibbosa, Crotalaria medicaginea, Grevillia agrifolia* (Pavlic et al. 2008), *Mangifera indica, Ficus carica* (Ray et al. 2010).

Distribution – Australia (Pavlic et al. 2008, Ray et al. 2010).

16.3. ***Neoscytalidium orchidacearum*** S. K. Huang, N. Tangthirasunun, J. C. Kang & K. D. Hyde, *Mycobiology* 44: 79 (2016).

Sexual morph not reported. See Huang et al. (2016) for illustrations and descriptions of asexual morph.

Type – Thailand, Sukhotai, on dead leaves of Orchid (*Orchidaceae*), 5 Aug 2012; S Hongsanan (holotype MFLU 13-0294, cultures ex-type MFLUCC 12-0533 and GZUCC 15113001).

Host – Orchid (Huang et al. 2016).

Distribution – Thailand (Huang et al. 2016).

17. ***Phaeobotryon*** Theiss. & Syd., *Ann. Mycol*. 13: 664 (1915), MycoBank MB3892.

This genus comprises four species. Sexual and asexual morphs have been reported within the genus. No cultures of the type species are extant.

Type species – *Phaeobotryon cercidis* (Cooke) Theiss. & Syd., Ann. Mycol. 13: 664. 1915.

17.1. ***Phaeobotryon cupressi*** Abdollahz., Zare & A.J.L. Phillips, *Persoonia* 23: 6 (2009), MycoBank MB513236.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Iran, Golestan Province, Gorgan, City Park, on twigs of *Cupressus sempervirens* (*Cupressaceae*), 15 Aug. 2006, M.A. Aghajani (holotype IRAN 13940F, cultures ex-type IRAN 1455C = CBS 124700).

Hosts – *Cupressus sempervirens* (Abdollahzadeh et al. 2009, Zlatkovic et al. 2016), *Juniperus scopulorum* (Alves et al. 2013).

Distribution – Iran (Abdollahzadeh et al. 2009), USA (Alves et al. 2013), Western Balkans (Zlatkovic et al. 2016).

17.2. ***Phaeobotryon mamane*** Crous & A.J.L. Phillips, *Persoonia* 21: 45 (2008), MycoBank MB506581.

Sexual morph and asexual morph reported. See Phillips et al. (2008) for illustrations and descriptions.

Type – USA, Hawaii, Manna Koa Park, Saddle Road, on stems of *Sophora chrysophylla* (*Fabaceae*), Jul. 2005, W. Gams (holotype CBS H-20109, culture ex-type CBS 122980).

Host – *Sophora chrysophylla* (Phillips et al. 2008).

Distribution – USA (Hawaii) (Phillips et al. 2008).

17.3. ***Phaeobotryon negundinis*** Daranagama, Bulgakov & K.D. Hyde, *Mycosphere* 7: 936 (2016), Facesoffunginumber FoF01916.

Sexual morph not reported. See Daranagama et al. (2016) for illustrations and descriptions of asexual morph.

Type – Russia, Rostov region, Rostov-on-Don city, Botanical Garden of Southern Federal University, Higher Park, on dying and dead twigs and branches of *Acer negundo* L. (*Sapindaceae*), 05 March 2014, T.S. Bulgakov (holotype MFLU 16-0475, culture ex-type MFLUCC 15-0436).

Hosts – *Acer negundo, Ligustrum vulgare, Forsythia* × *intermedia* (Daranagama et al. 2016).

Distribution – Russia (Daranagama et al. 2016).

17.4. ***Phaeobotryon rhois*** C.M. Tian, X.L. Fan & K.D. Hyde, *Phytotaxa* 205: 95 (2015), MycoBank MB811599, Facesoffunginumber FOF00596.

Sexual morph not reported. See Fan et al. (2015) for illustrations and descriptions of asexual morph.

Type – China, Ningxia Province: Yinchuan City, Yongning County, Wanghong Town, Nongsheng Village, 38°22’97.02” N, 106°21’44.89” E, alt. 1101 m, on twigs and branches of *Rhus typhina*

(Anacardiaceae), 26 July 2013, Xin-lei Fan & Hong Fan (holotype BJFC-S1007, cultures ex-type CFCC 89662 = CCTCC AF2014017).

Host – *Rhus typhina* (Fan et al. 2015).

Distribution – China (Fan et al. 2015).

18. ***Pseudofusicoccum*** Mohali, Slippers & M.J. Wingf., *Stud. Mycol*. 55: 249 (2006), MycoBank MB500884.

This genus comprises seven species. The sexual morph has not been reported for any species. The phylogenetic position of this genus has been questioned (Slippers et al. 2013) and it is still uncertain if it resides within *Botryosphaeriaceae*. However, until its position has been definitively resolved we continue to regard it as a genus within *Botryophaeriaceae*.

Type species – *Pseudofusicoccum stromaticum* (Mohali, Slippers & M.J. Wingf.) Mohali, Slippers & M.J. Wingf., Stud. Mycol. 55: 249. 2006.

18.1. ***Pseudofusicoccum adansoniae*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 855 (2008), MycoBank MB512048.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Derby, on *Adansonia gibbosa* (*Malvaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59841, culture ex-type CBS 122055).

Hosts – *Adansonia gibbosa*, *Acacia synchronica*, *Eucalyptus sp.*, *Ficus opposita* (Pavlic et al. 2008), *Adansonia gregorii*, *Grevillea agrifolia* (Sakalidis et al. 2011), *Cassia fistula* (Trakunyingcharoen et al. 2015b), *Dimocarpus longan* (Trakunyingcharoen et al. 2015b), *Hevea brasiliensis* (Trakunyingcharoen et al. 2015a), *Jatropha podagrica* (Sharma et al. 2013), *Senna siamea* (Trakunyingcharoen et al. 2015b), *Tectona grandis* (Doilom et al. 2015).

Distribution – Australia (Pavlic et al. 2008, Sakalidis et al. 2011), India (Sharma et al. 2013), Thailand (Doilom et al. 2015, Trakunyingcharoen et al. 2015a, b).

18.2. ***Pseudofusicoccum ardesiacum*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 858 (2008), MycoBank MB512051.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Mount Hardman, Great Northern Highway, on *Adansonia gibbosa* (*Malvaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59843, culture ex-type CBS 122062).

Hosts – *Adansonia gibbosa*, *Eucalyptus* sp. (Pavlic et al. 2008), *Caesalpinia pulcherrima*, *Veitchia merrillii* (Trakunyingcharoen et al. 2015b).

Distribution – Australia (Pavlic et al. 2008), Thailand (Trakunyingcharoen et al. 2015b).

18.3. ***Pseudofusicoccum artocarpi*** T. Trakunyingcharoen, L. Lombard & Crous, *Persoonia* 34: 96 (2014), MycoBank MB810167.

Sexual morph not reported. See Trakunyingcharoen et al. (2015b) for illustrations and descriptions of asexual morph.

Type – Thailand, Chiang Mai province, on twigs of *Artocarpus heterophyllus* (*Moraceae*), May 2012, T. Trakunyingcharoen (holotype CBS H-21935, culture ex-type CBS 138655).

Host – *Artocarpus heterophyllus* (Trakunyingcharoen et al. 2015b).

Distribution – Thailand (Trakunyingcharoen et al. 2015b).

18.4. ***Pseudofusicoccum kimberleyensis*** Pavlic, T.I. Burgess & M.J. Wingf., *Mycologia* 100: 857 (2008), MycoBank MB512049.

Sexual morph not reported. See Pavlic et al. (2008) for illustrations and descriptions of asexual morph.

Type – Australia, Western Australia, Tunnel Creek National Park, on *Acacia synchronica* (*Fabaceae*), Jul. 2006, T.I. Burgess (holotype PREM 59842, culture ex-type CBS 122058).

Hosts – *Adansonia gibbosa*, *Acacia synchronica*, *Eucalyptus* sp., *Ficus opposita* (Pavlic et al. 2008).

Distribution – Western Australia (Pavlic et al. 2008).

18.5. ***Pseudofusicoccum olivaceum*** Mehl & Slippers, *Mycologia* 103: 537 (2011), MycoBank MB513501.

Sexual morph not reported. See Mehl et al. (2011) for illustrations and descriptions of asexual morph.

Type – South Africa, Mpumalanga Province, Kruger National Park, Pretoriuskop, on an asymptomatic branch of *Pterocarpus angolensis* (*Fabaceae*), Sep. 2005, J. Roux (holotype PREM 60328, culture ex-type CBS 124939).

Host – *Pterocarpus angolensis* (Mehl et al. 2011).

Distribution – South Africa (Mehl et al. 2011).

18.6. ***Pseudofusicoccum stromaticum*** (Mohali, Slippers & M.J. Wingf.) Mohali, Slippers & M.J. Wingf., *Stud. Mycol*. 55: 249, MycoBank MB500885.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – Venezuela, Portuguesa Morph, Acarigua, Smurfit Company, on branches of *Eucalyptus urophylla* (*Myrtaceae*), Feb. 2003, S. Mohali (holotype PREM 58237, culture ex-type CMW 13366, other representative cultures CBS 117448, CBS 117449).

Hosts – *Eucalyptus* sp. (Mohali et al. 2006), *Acacia mangium* (Mohali et al. 2006), *Mangifera indica* (Marques et al. 2012, 2013b).

Distribution – Brazil (Marques et al. 2012, 2013b), Venezuela (Mohali et al. 2006).

18.7. ***Pseudofusicoccum violaceum*** Mehl & Slippers, *Mycologia* 103: 541 (2011), MycoBank MB513500.

Sexual morph not reported. See Mehl et al. (2011) for illustrations and descriptions of asexual morph.

Type – South Africa, Mpumalanga Province, Mawewe Nature Reserve, on an asymptomatic branch of *Pterocarpus angolensis* (*Fabaceae*), Dec. 2005, J.W.M. Mehl & J. Roux (holotype PREM 60333, culture ex-type CBS 124936).

Hosts – *Pterocarpus angolensis* (Mehl et al. 2011), *Tinospora cordifolia* (Mishra et al. 2012).

Distribution – India (Mishra et al. 2012), South Africa (Mehl et al. 2011).

19. ***Sakireeta*** Subram. & K. Ramakr., *Journal of the Indian Botanical Society* 36: 83 (1957).
This genus comprises only one species. The sexual morph has not been reported.
Type species – *Sakireeta madreeya* Subram. & K. Ramakr 1957.

19.1. ***Sakireeta madreeya*** Subram. & K. Ramakr., *Journal of the Indian Botanical Society* 36: 84 (1957).

Synonym – *Tiarosporella madreeya* (Subram. & K. Ramakr.) Nag Raj, *Canadian Journal of Botany* 51: 2470 (1974) [1973].

Sexual morph not reported. See Crous et al. (2015a) for illustrations and descriptions of asexual morph.

Type – India, Madras, Choolai, on dead culm of *Aristida setacea* (*Poaceae*), 27 Sept. 1951, K. Ramakrishnan (holotype MUBL 631); Kurukshetra Univ., undetermined grass host, July 1976, R.S. Mehrotra, CBS H-21854, culture CBS 532.76.

Host – *Aristida setacea* (Crous et al. 2015a).

Distribution – India (Crous et al. 2015a).

20. ***Sardiniella*** Linaldeddu, A. Alves & A.J.L. Phillips, *Mycosphere* 7: 900 (2016), MycoBank MB817511.

Sardiniella was introduced to accommodate species that are morphologically similar to *Diplodia* and *Dothiorella/Spencermartinsia*. Phylogenetically *Sardiniella* is closely related to *Neofusicoccum* and *Dothiorella/Spencermartinsia*. This genus comprises a single species. The sexual morph has not been reported.

Type species – *Sardiniella urbana* Linaldeddu, A. Alves & A.J.L. Phillips 2016.

20. 1. ***Sardiniella urbana*** Linaldeddu, A. Alves & A.J.L. Phillips, *Mycosphere* 7: 900 (2016), MycoBank MB817512.

Sexual morph not reported. See Linaldeddu et al. (2016b) for illustrations and descriptions of asexual morph.

Type – Italy, Sassari, isolated from a branch canker of *Celtis australis* (*Cannabaceae*), 9 September 2013, Benedetto T. Linaldeddu (holotype LISE 96308, culture ex-type CBS 141580).

Host – *Celtis australis* (Linaldeddu et al. 2016b)

Distribution – Italy (Linaldeddu et al. 2016b)

21. ***Spencermartinsia*** A.J.L. Phillips, A. Alves & Crous, *Persoonia* 21: 51 (2008), MycoBank MB511762.

This genus comprises eight species (Fig. 4). Sexual morph and asexual morphs have been reported within the genus. Phylogenetically *Spencermartinsia* is very closely related to *Dothiorella*. Morphologically the two can be differentiated only in the sexual morphs; ascospores of *Spencermartinsia* bear hyaline apiculi, which are absent in *Dothiorella*. With the addition of more species, the distinction between these two genera has become more tenuous. Nevertheless, in this paper we continue to regard them as separate pending further study.

Type species – *Spencermartinsia viticola* (A.J.L. Phillips & J. Luque) A.J.L. Phillips, A. Alves & Crous, *Persoonia* 21: 51. 2008.

21.1. ***Spencermartinsia alpina*** Y. Zhang ter. & M. Zhang, sp. nov., MycoBank MB 819517.

"Spencermartinsia alpina" Y. Zhang ter. & M. Zhang, *Mycosphere* 7: 945 (2016), nom. inval.

Zhang et al. (2016) introduced *Spencermartinsia alpina* as a new species but did not explicitly designate a holotype and thus the name was invalid. To validate the name the holotype is cited below. The sexual morph was not reported. Full description and diagnosis in Zhang et al. (2016).

Type – China, Yunnan Province, Chuxiong City, Zixi Mountain Forest Park, from thick branch of dead young tree of *Platycladus orientalis* (*Cupressaceae*), 16 Dec 2014, leg. W. He & J.R. Wu, det. Y. Zhang (holotype HMAS254733, culture ex-type CGMCC 3.18001).

Host – *Platycladus orientalis* (Zhang et al. 2016).

Distribution – China (Zhang et al. 2016).

21.2. ***Spencermartinsia citricola*** A.J.L. Phillips & Abdollahz., *Persoonia* 32: 7 (2014), MycoBank MB803992.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – New Zealand, Northland, Kerikeri, Collins Orchard, Inlet Road, on twigs of *Citrus sinensis* (*Rutaceae*), Sept. 2006, S.R. Pennycook, P.R. Johnston and B.C. Paulus (holotype PDD92023, cultures ex-type ICMP16828 = CBS124729).

Host – *Citrus sinensis* (Abdollahzadeh et al. 2014).

Distribution – New Zealand (Abdollahzadeh et al. 2014).

21.3. ***Spencermartinsia mangiferae*** Abdollahz., Javadi & A.J.L. Phillips, *Persoonia* 32: 9 (2014), MycoBank MB803993.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – Iran, Hormozgan Province, Bandar Abbas (Hajiabad-Siaho), on twigs of *Mangifera indica* (*Anacardiaceae*), Mar. 2007, J. Abdollahzadeh & A. Javadi (holotype IRAN 14266F, cultures ex-type IRAN 1584C = CBS 124727).

Host – *Mangifera indica* (Abdollahzadeh et al. 2014).

Distribution – Iran (Abdollahzadeh et al. 2014).

21.4. ***Spencermartinsia plurivora*** Abdollahz., Javadi & A.J.L. Phillips, *Persoonia* 32: 9 (2014), MycoBank MB803994.

Sexual morph not reported. See Abdollahzadeh et al. (2014) for illustrations and descriptions of asexual morph.

Type – Iran, Khuzestan Province, Dezful (Safiabad Citrus Research Centre), on twigs of *Citrus* sp. (*Rutaceae*), Nov. 2006, J. Abdollahzadeh & A. Javadi (holotype IRAN 14267F, cultures ex-type IRAN 1557C = CBS 124724).

Host – *Citrus* sp. (Abdollahzadeh et al. 2014).

Distribution – Iran (Abdollahzadeh et al. 2014).

21.5. ***Spencermartinsia rosulata*** F.J.J. Van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 164 (2014), MycoBank MB518724.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and descriptions of asexual morph.

Type – Namibia, Windhoek, from *Acacia karroo* (*Fabaceae*), Feb. 2006, F.J.J. van der Walt & J. Roux (holotype PREM 59622, culture ex-type CBS 121760).

Host – *Acacia* sp. (Slippers et al. 2014).

Distribution – Namibia, South Africa (Slippers et al. 2014).

21.6. ***Spencermartinsia viticola*** (A.J.L. Phillips & J. Luque) A.J.L. Phillips, A. Alves & Crous, *Persoonia* 21: 51 (2008), MycoBank MB511763.

Sexual morph and asexual morph reported. See Phillips et al. (2013) for illustrations and descriptions.

Type – Spain, Catalonia, Vimbodí, near the Monastery of Poblet, on pruned canes of *Vitis vinifera* cv. Garnatxa Negra (*Vitaceae*), Aug. 2004, J. Luque & S. Martos (holotype LISE 95177, culture ex-type CBS 117009).

Hosts – *Acacia karroo* (Jami et al. 2013, 2014), *Celtis africana* (Jami et al. 2014), *Citrus* sp. (Adesemoye & Eskalen 2011, Inderbitzin et al. 2010), *Gymnosporia buxifolia* (Jami et al. 2014), *Populus cathayana* (Zhang et al. 2009), *Poniciana gilliesii* (Phillips et al. 2008), *Prunus persica* and *P. salicina* (Damm et al. 2007), *Vitis vinifera* (de Wet et al. 2009, Luque et al. 2005, Qiu et al. 2011, Úrbez-Torres et al. 2007, Pitt et al. 2013b, Diaz et al. 2013, Valencia et al. 2015).

Distribution – Australia (Qiu et al. 2011, Pitt et al. 2013b), Chile (Diaz et al. 2013), China (Zhang et al. 2009, Valencia et al. 2015), France (Phillips et al. 2008), South Africa (Damm et al. 2007, de Wet et al. 2009, Jami et al. 2013, 2014), Spain (Luque et al. 2005) and USA (Adesemoye & Eskalen 2011, Inderbitzin et al. 2010, Úrbez-Torres et al. 2007).

21.7. ***Spencermartinsia westrale*** W.M. Pitt, J.R. Úrbez-Torres & Trouillas, *Australas. Pl. Path*. 44: 48 (2015), MycoBank MB808286.

Sexual morph not reported. See Pitt et al. (2015) for illustrations and descriptions of asexual morph.

Type – Australia, Upper Swan, Western Australia, discarded canes of *Vitis vinifera* (*Vitaceae*), November 2009, F.P. Trouillas (holotype, DAR80529, culture ex-type, DAR80529).

Host – *Vitis vinifera* (Pitt et al. 2015).

Distribution – Australia (Pitt et al. 2015).

21.8. ***Spencermartinsia yunnana*** Y. Zhang ter. & M. Zhang, sp. nov, MycoBank MB 819518.

"Spencermartinsia yunnana" Y. Zhang ter. & M. Zhang, *Mycosphere* 7: 946 (2016), nom. inval.

Zhang et al. (2016) introduced *Spencermartinsia yunnana* as a new species but did not explicitly designate a holotype and thus the name was invalid. To validate the name the holotype is cited below. The sexual morph not reported. Full description and diagnosis in Zhang et al. (2016).

Type – China, Yunnan Province, Chuxiong City, Zixi Mountain Forest Park, from dead branch of *Camellia* sp. (*Theaceae*), 16 Dec 2014, leg. W. He & J.R. Wu, det. Y. Zhang (holotype HMAS254734, culture ex-type CGMCC 3.17999).

Hosts – *Acer buergerianum*, *Camellia* sp., *Poncirus trifoliata*, *Ternstroemia gymnanthera* (Zhang et al. 2016).

Distribution – China (Zhang et al. 2016).

22. ***Sphaeropsis*** Sacc., *Michelia* 2: 105. 1880, MycoBank MB9992.
This genus comprises five species. Sexual and asexual morphs have been reported within the genus.

Type species – *Sphaeropsis visci* (Alb. & Schwein.) Sacc., *Michelia* 2: 105. 1880.

22.1. ***Sphaeropsis citrigena*** (A.J.L. Phillips, P.R. Johnst. & Pennycook) A.J.L. Phillips & A. Alves, *Stud. Mycol*. 76: 158 (2013), MycoBank MB805463.

Sexual morph and asexual morph reported. See Phillips et al. (2008) and Phillips et al. (2013) for illustrations and descriptions.

Type – New Zealand, Northland, Kerikeri, Davies Orchard (#2), Inlet Road, on recently dead bark-covered twigs of *Citrus sinensis* (*Rutaceae*), 6 Sep. 2006, S.R. Pennycook, P.R. Johnston & B.C. Paulus (holotype PDD 89238, culture ex-type ICMP 16812).

Host – *Citrus sinensis* (Phillips et al. 2013).

Distribution – New Zealand (Phillips et al. 2013).

22.2. ***Sphaeropsis eucalypticola*** (Doilom, J.K. Liu, & K.D. Hyde) A.J.L. Phillips, *Stud. Mycol*. 76: 158 (2013), MycoBank MB805464.

Asexual morph not reported. See Liu et al. (2012) and Phillips et al. (2013) for illustrations and descriptions of sexual morph.

Type – Thailand, Chiang Rai Province, Muang District, on dead twig of *Eucalyptus* sp. (*Myrtaceae*), 8 Aug. 2011, M. Doilom (holotype MFLU 12-0753, culture ex-type MFLUCC 11-0579 = CBS 133993).

Hosts – *Eucalyptus* sp. (Liu et al. 2012), *Tectona grandis* (Doilom et al. 2015).

Distribution – Thailand (Liu et al. 2012, Doilom et al. 2015).

22.3. ***Sphaeropsis porosa*** (Van Niekerk & Crous) A.J.L. Phillips & A. Alves, *Stud. Mycol*. 76: 159 (2013), MycoBank MB805465.

Sexual morph not reported. See Phillips et al. (2013) for illustrations and descriptions of asexual morph.

Type – South Africa, Western Cape Province, Stellenbosch, on *Vitis vinifera* (*Vitaceae*), 2002, J.M. van Niekerk (holotype CBS H-12039, culture ex-type CBS 110496).

Host – *Vitis vinifera* (van Niekerk et al. 2004).

Distribution – South Africa (Western Cape Province) (van Niekerk et al. 2004).

22.4. ***Sphaeropsis variabilis*** F.J.J. Van der Walt, Slippers & G.J. Marais, *Persoonia* 33: 164 (2014), MycoBank MB518720.

Sexual morph not reported. See Slippers et al. (2014) for illustrations and description of asexual morph. In our families tree (Fig. 1) *S. variabilis* appears to be more closely related to *Alanphillipsia* than to *Sphaeropsis*. In the phylogenies presented by Slippers et al. (2014) *S. variabilis* was not clearly aligned within *Sphaeropsis*, but they did not include any species of *Alanphillipsia* in their phylogenies. Furthermore, Slippers et al. (2014) did not include any details of paraphyses, which are an important character that distinguishes *Sphaeropsis* from *Diplodia*. For these reasons we consider that the position of *S. variabilis* in *Sphaeropsis* is tenable and needs to be re-assessed.

Type – Namibia, Windhoek, from *Acacia karroo* (*Fabaceae*), Feb. 2006, F.J.J. van der Walt & J. Roux (holotype PREM 59637, culture ex-type CBS 121774).

Host – *Acacia* sp. (Slippers et al. 2014).

Distribution – Namibia, South Africa (Slippers et al. 2014).

22.5. ***Sphaeropsis visci*** (Alb. & Schwein.) Sacc., Michelia 2: 105. (1880), MycoBank MB281898.

Sexual morph and asexual morph reported. See Phillips et al. (2008) and Phillips et al. (2013) for illustrations and descriptions.

Type – Germany, on *Viscum album* (*Santalaceae*), Albertini & Schweinitz, holotype could not be located and presumably lost. Ukraine, National Nature Park ‘Svjatie Gory’, on branches of *Viscum album*, 10 Mar. 2007, Á. Akulov (neotype CWU (MYC) AS 2271, cultures ex-neotype CBS 122526, CBS 122527).

Hosts – *Viscum album* (Sutton 1980, Phillips et al. 2008, Varga et al. 2014, Poczai et al. 2015, Zlatkovic et al. 2016).

Distribution – Austria, Czechoslovakia, Egypt, Romania (Sutton 1980), Ukraine (Phillips et al. 2008), Hungary (Poczai et al. 2015), Serbia, Luxemburg (Zlatkovic et al. 2016).

23. ***Tiarosporella*** Höhn, Ber. *Deutsch. Bot. Ges*. 37: 159. (1919), MycoBank MB10233.
This genus comprises only one species. The sexual morph has not been reported.

Type species: *Tiarosporella paludosa* (Sacc. & Fiori ex P. Syd.) Höhn 1919.

23.1. ***Tiarosporella paludosa*** (Sacc. & Fiori) Höhn., *Berichte der Deutschen Botanischen Gesellschaft* 37: 159 (1919).

Basionym – *Neottiospora paludosa* Sacc. & Fiori, *Hedwigia Beiblätter* 38: 137 (1899).

Sexual morph not reported. See Crous et al. (2015a) for illustrations and descriptions of asexual morph.

Type – Germany, Berlin, Zahlendorf, on leaves of *Eriophorum polystachium* (*Cyperaceae*), Oct. 1895, P. Sydow (holotype in FH, isotype DAOM 130546). Netherlands, Winterswijk in the Korenburgerveen, Latitude 51.990133, Longitude 6.664013, on *Trichophorum cespitosum* subsp. *germanicum*, 28 Apr. 2013, W. Quaedvlieg (epitype CBS H-21855 MBT200481, culture ex-epitype CBS 138577).

Hosts – *Eleocharis palustris*, *Trichophorum cespitosum* (Crous et al. 2015a).

Distribution – Germany, Netherlands (Crous et al. 2015a).

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