Abstract: In the present study, we surveyed the ascomycetes from bamboo of *Phyllostachys* across Sichuan Province, China. A biphasic approach based on morphological characteristics and multigene phylogeny confirmed seven species, including one new genus, two new species, and five new host record species. A novel genus *Parallonectiosporina* is introduced to accommodate *Pa. sichuanensis* that was collected from leaves of *Phyllostachys violascens*. Moreover, the newly introduced species *Bifusisporella sichuanensis* was isolated from leaves of *P. edulis*, and five species were newly recorded on bamboos, four species belonging to *Apiospora*, viz. *Ap. yunnana*, *Ap. neosubglobosa*, *Ap. jiangxiensis*, and *Ap. hyalina*, and the last species, *Seriascoma yunnanense*, isolated from dead culms of *P. heterocycla*. Morphologically similar and phylogenetically related taxa were compared. Comprehensive descriptions, color photo plates of micromorphology are provided.

Keywords: bambusicolous fungi; molecular phylogeny; one new genus; systematics; two new species
identifications were conducted lacking molecular data and detailed micromorphology, and as most bamboos are unidentified, the relationship of bambusicolous fungi with bamboo species is not clear.

Due to the high fungal diversity on *Phyllostachys*, an ongoing investigation was conducted in several main producing or planting areas of bamboo *Phyllostachys* in Sichuan Province, China, including Ya’an City, Qionglai City, Chengdu City, and Yibin City. In this study, we provide detailed taxonomic features combining morphology and phylogeny on the fungi associated with *Phyllostachys* from Sichuan Province, China, which is a fundamental task for the bioresource collection on bambusicolous fungi.

2. Materials and Methods

2.1. Specimen Collection and Morphological Study

From 2020 to 2021, the specimens were collected from leaves, branches, and culms. The samples were kept in plastic bags and taken back to the laboratory after being photographed with a Sony DSC-HX3 digital camera. The fungi were isolated into pure culture based on single spore isolation [25]. Glass slide specimens were prepared by free-hand slicing with double-sided blades for morphologic observation. Morphological characteristics of ascomata and sporodochia were observed using a dissecting microscope, the NVT-GG (Shanghai Advanced Photoelectric Technology Co. Ltd., Shanghai, China), and photographed with a VS-800C micro-digital camera (Shenzhen Weishen Times Technology Co. Ltd., Shenzhen, China). An Olympus BX43 compound microscope with an Olympus DP22 digital camera was used to observe and photograph the microstructure of asci, ascospores, conidiophores, and conidia. Measurements were performed using Tarosoft® Image Frame Work v.0.9.7 (Tarosoft (R), Nonth Buri, Thailand). Specimens were deposited at the Herbarium of Sichuan Agricultural University, Chengdu, China (SICAU), and pure cultures were deposited at the Culture Collection in Sichuan Agricultural University (SICAUCC).

2.2. DNA Extraction, PCR Amplification, and Nucleotide Sequencing

Genomic DNA was extracted from fresh mycelia which was cultured on PDA at 25 °C for 15–30 days, using a Trelief™ Plant Genomic DNA Kit. Primers ITS5/ITS4 [26], NS1/NS4 [26], LR0R/LR5 [27], T1/Bt2b [28,29], RP1B1-Ac/RPB1-Cr [30,31], and fRPB2-5F/fRPB2-7cR [32] were used for the amplification of internal transcribed spacers (ITS), the partial small subunit nuclear rDNA (SSU), the partial large subunit nuclear rDNA (LSU), the β-tubulin gene (tub2), the large subunit of RNA polymerase I (rpb1), and RNA polymerase II second largest subunit (rpb2) genes, respectively. Primers EF1-983F/EF1-2218R [33] and EF1-728F/EF2 [34,35] were employed for translation elongation factor 1-alpha (tef1-α) genes.

Amplification reactions were performed in 25 μL of total reaction that contained 22 μL Master Mix (Beijing TsingKe Biotech Co., Ltd., Beijing, China), 1 μL each of forward and reverse (10 μM) primers and 1 μL of DNA template. The amplification reactions were performed as described by Dai et al. [16] and Wang et al. [36]. PCR products were purified and sequenced at TsingKe Biological Technology Co., Ltd. (Chengdu, China). The resulting sequences were submitted to GenBank.

2.3. Sequence Alignment and Phylogenetic Analyses

Based on blast searches in GenBank, using ITS, LSU, SSU, tef1-α, tub2, rpb1, or rpb2 sequence data, separate phylogenetic analyses were carried out to determine the placements of each fungal group (Table 1). Sequences for phylogenetic analyses were selected mainly from recently published literature and phylogenetic related sequences based on BLAST searches in GenBank (Table A1). Datasets were aligned using MAFFT v.7.407 [37], and ambiguous regions were excluded with BioEdit version 7.0.5.3 [38]. Maximum likelihood (ML) and Bayesian inference (BI) were constructed as described in Xu et al. [39]. The
phylogram was visualized with FigureTree v. 1.4.3 and edited using Adobe Illustrator CS6 (Adobe Systems Inc., San Jose, CA, USA).

Table 1. Selected genes for polymerase chain reaction of each genus.

| Genera            | Sequences Dataset                  |
|-------------------|------------------------------------|
| Apiospora         | ITS, LSU, tub2, tef1-α             |
| Bifusisporella    | ITS, LSU, tef1-α, rpb1             |
| Paralloneottiosporina | ITS, LSU, SSU, tef1-α         |
| Seriascom         | ITS, LSU, SSU, tef1-α, rpb2       |

3. Results
3.1. Phylogenetic Analyses

A combined dataset (ITS, LSU, tef1-α, tub2) comprising 138 taxa within Apiosporaceae, which is rooted with Pestalotiopsis chamaeropis (CBS 237.38) and Pe. colombiensis (CBS 118553) (Pestalotiopsidaceae, Amphisphaeriales), was used for the phylogenetic analyses. The alignment contained 5875 characters (ITS = 999, LSU = 1382, tef1-α = 1651, tub2 = 1844), including gaps. The best scoring RAxML tree with a final likelihood value of $-36198.939448$ is presented. The matrix had 2337 distinct alignment patterns, with 64.85% of undetermined characters or gaps. Estimated base frequencies were as follows: $A = 0.237208, C = 0.257370, G = 0.253511, T = 0.251911$, with substitution rates $AC = 1.104968, AG = 2.746651, AT = 1.143208, CG = 0.910079, CT = 4.335389, GT = 1.000000$. The gamma distribution shape parameter $\alpha = 0.269105$, and the tree length = 3.509694. In the phylogenetic trees generated from ML and BI analyses, the strain SICAUCC 22-0032 clustered with the known species Apiospora hydei (KUMCC 16-0204, CBS 114990) in a clade with 97% ML and 0.99 BYPP support value, strain SICAUCC 22-0070 clustered with Ap. jiangxiensis (CGMCC 3.18381, LC4578) with high support values (100% ML and 1.00 BYPP), strain SICAUCC 22-0071 clustered with Ap. neosubglobosa (JHB006, JHB007) in a clade with 100% ML and 1.00 BYPP support value, and strain SICAUCC 22-0072 clustered with the Ap. yunnana (MFLUCC 15-0002) in a clade with 100% ML and 1.00 BYPP support values (Figure 1).

Phylogenetic analyses of a concatenated aligned dataset (ITS, LSU, rpb1, tef1-α), including 70 taxa within Magnaportheaceae and Pyriculariaceae, were conducted and rooted with Ophioceras dolichostomum (CBS 114926) and O. leptosporum (CBS 894.70) (Ophioceraceae, Magnaporthales). The alignment contained 4094 characters (ITS = 899, LSU = 1105, rpb1 = 1047, tef1-α = 1043), including gaps. The best scoring RAxML tree with a final likelihood value of $-31022.648763$ is presented. The matrix had 1923 distinct alignment patterns, with 36.77% of undetermined characters or gaps. Estimated base frequencies were as follows: $A = 0.243596, C = 0.275654, G = 0.281915, T = 0.198836$, with substitution rates $AC = 1.103727, AG = 2.292134, AT = 1.431191, CG = 0.918700, CT = 5.773674, GT = 1.000000$. The gamma distribution shape parameter $\alpha = 0.319184$, and the tree length = 3.313974. In the phylogenetic tree (Figure 2), the novel species Bifusisporella sichuanensis constitutes a highly supported independent lineage (ML = 100%, BYPP = 1.00) with B. sorghi (URM 7864, URM 7442).

The concatenated aligned dataset of ITS, LSU, SSU, tef1-α sequences, including 124 ingroup taxa within Phaeosphariaceae and two outgroup taxa in Leptosphaeriaceae, were used for the phylogenetic analyses of Paralloneottiosporina. The alignment contained 5851 characters (ITS = 1469, LSU = 1433, SSU = 1548, tef1-α = 1401), including gaps. The best scoring RAxML tree with a final likelihood value of $-46908.078740$ is presented. The matrix had 2382 distinct alignment patterns, with 36.77% of undetermined characters or gaps. Estimated base frequencies were as follows: $A = 0.243596, C = 0.275654, G = 0.281915, T = 0.198836$, with substitution rates $AC = 1.103727, AG = 2.292134, AT = 1.431191, CG = 0.918700, CT = 5.773674, GT = 1.000000$. The gamma distribution shape parameter $\alpha = 0.319184$, and the tree length = 3.313974. In the phylogenetic tree (Figure 2), the novel species Bifusisporella sichuanensis constitutes a highly supported independent lineage (ML = 100%, BYPP = 1.00) with B. sorghi (URM 7864, URM 7442).

The concatenated aligned dataset of ITS, LSU, SSU, tef1-α sequences, including 124 ingroup taxa within Phaeosphariaceae and two outgroup taxa in Leptosphaeriaceae, were used for the phylogenetic analyses of Paralloneottiosporina. The alignment contained 5851 characters (ITS = 1469, LSU = 1433, SSU = 1548, tef1-α = 1401), including gaps. The best scoring RAxML tree with a final likelihood value of $-46908.078740$ is presented. The matrix had 2382 distinct alignment patterns, with 36.77% of undetermined characters or gaps. Estimated base frequencies were as follows: $A = 0.243596, C = 0.275654, G = 0.281915, T = 0.198836$, with substitution rates $AC = 1.103727, AG = 2.292134, AT = 1.431191, CG = 0.918700, CT = 5.773674, GT = 1.000000$. The gamma distribution shape parameter $\alpha = 0.319184$, and the tree length = 3.313974. In the phylogenetic tree generated from ML and BI analyses, the novel species Paralloneottiosporina sichuanensis (SICAUCC 22-0074, SICAUCC 22-0075) constitutes a moderately supported independent lineage (63%
ML/0.99 BYPP statistical support) with the species *Alloneottiosporina thailandica* (MFLUCC 15-0576) (Figure 3).

Figure 1. Cont.
Figure 1. Phylogram generated from RAxML analysis based on combined ITS, LSU, tub2, and tef1-α sequence data of Apiosporaceae. Bootstrap support values for maximum likelihood (ML, left) higher than 50% and Bayesian posterior probabilities (BYPP, right) equal to or greater than 0.90 are indicated at the nodes, respectively. The sequences from ex-type strains are marked by a superscript symbol T. The newly generated sequences are written in red. Arthrinium species with yellow background were temporarily not combined to Apiospora.
Figure 2. Phylogram generated from RAxML analysis based on combined ITS, LSU, rpb1, and tef1-α sequence data of Magnaporthaceae and Pyriculariaceae. Bootstrap support values for maximum likelihood (ML, left) higher than 50% and Bayesian posterior probabilities (BYPP, right) equal to or greater than 0.90 are indicated at the nodes, respectively. The sequences from ex-type strains are marked by a superscript symbol T. The newly generated sequence is written in red.
A combined dataset (ITS, LSU, SSU, tef1-α, rpb2) comprising 25 taxa within Bambusico-laceae, Biatriosporaceae, Rousselloaceae, Torulaceae, and Paradictyoarthriniaceae was used for phylogenetic analyses of Seriascoma, and the Westernykella ornata (CBS 379.55) (Sporormiaceae) was used as outgroup taxon. The alignment contained 6569 characters (LSU = 1383, SSU = 1741, tef1-α = 1346, rpb2 = 2099), including gaps. The best scoring RAxML tree with a final likelihood value of −22606.776997 is presented. The matrix had 1406 distinct alignment patterns, with 48.40% of undetermined characters or gaps. Estimated base frequencies were as follows: A = 0.250203, C = 0.247742, G = 0.269455, T = 0.232600, with substitution rates AC = 1.348170, AG = 4.119625, AT = 1.278817, CG = 1.296090, CT = 9.080955, GT = 1.000000. The gamma distribution shape parameter α = 0.146142, and the tree length = 1.192279. According to the phylogenetic tree (Figure 4), the strain (SICAUCC 22-0059) clustered with Seriascoma yunnanense (MFLU 19-0690) in a clade with 100% ML and 1.00 BYPP statistical support.

Figure 3. Cont.
Figure 3. Phylogram generated from RAxML analysis based on combined ITS, LSU, SSU, and tef1-α sequence data of Phaeosphaeriaceae. Bootstrap support values for maximum likelihood (ML, left) higher than 50% and Bayesian posterior probabilities (BYP, right) equal to or greater than 0.90 are indicated at the nodes, respectively. The sequences from ex-type strains are marked by a superscript symbol T. The newly generated sequences are written in red.

3.2. Taxonomy

Apiosporaceae D.K. Hyde, J. Fröhl., Joanne E. Taylor & M.E. Barr, Sydowia. 50 (1): 23 (1998).

Apiospora hydei (Crous) Pintos & P. Alvarado, Fungal Systematics and Evolution. 7: 206 (2021) (Figure 5).

≡ Arthrinium hydei (Crous) IMA Fungus 4(1): 142 (2013).

Saprobiic on dead culms of Phyllostachys nigra (Lodd. ex Lindl.) Munro. Sexual morph: Asciostromata 421–1343 × 174–387 × 176–245 µm (X = 705 × 267 × 198 µm, n = 30), solitary to gregarious, immersed, fusiform to ellipsoid, dark brown to black, multi-loculate, with long axis. Peridium 17–46 µm wide, composed of 8–15 layers of brown to hyaline cells of textura angularis to prismatica. Hamathecium 2–6.5 µm wide, composed of dense, long, septate, and unbranched paraphyses. Ascii 81–123 × 16–23 µm, (X = 116 × 180 µm, n = 50), 8–spored, unitunicate, broadly cylindrical, slightly curved, with a short pedicel, apically rounded. Ascospores 24–30 × 7–11 µm, (X = 26 × 10 µm, n = 50), 2-seriate, elliptical, 1–septate, with a large, curved upper cell and small lower cell, with narrowly rounded ends, hyaline, guttules, smooth-walled, surrounded by gelatinous sheath. Asexual morph: see Crous et al. [40].

Material examined: China, Sichuan Province, Chengdu City, Wenjiang District (19°30′42.22″ N, 103°51′19″ E, Alt. 528 m), on dead culms of Phyllostachys nigra, 14 March 2021, Yi-cong Lv, LYC202103003 (SICAU 22-0032), living culture SICAUCC 22-0032.

Culture characters: Ascospores germinate within 24 h. Colonies grow fast on PDA, reaching 6 cm after one week at 25 °C, under 12 h light/12 h dark, and are cottony, circular, and white from above and light yellow below, with irregular edge.
Notes: *Apiospora hydei* was introduced based on the asexual morph characters and phylogeny analyses by Crous et al. [40]. Morphological comparisons were impossible due to the lack of sexual morph between our isolates and the ex-type strain (CBS 114990), but it is similar to *A. hydei* in sexual descriptions provided by Dai et al. [41]. Nucleotide comparisons of ITS, LSU, *tef1*-α and *tub2* (SICAUCC 22-0033) showed high homology with the sequences of *A. hydei* (CBS 114990), similarities are 100% (528/528, 0 gaps), 99.77% (896/898, 0 gaps), 99.71% (355/356, 0 gaps), and 98.82% (754/763, 0 gaps), respectively. *Apiospora jiangxiensis* (M. Wang & L. Cai) Pintos & P. Alvarado, Fungal Systematics and Evolution 7: 206 (2021) (Figure 6).

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**Figure 4.** Phylogram generated from RAxML analysis based on combined ITS, LSU, *rpb2*, and *tef1*-α sequence data of isolates within Bambusicolaceae and other representative species in Biatriosporaceae, Rousoellaceae, Torulaceae, and Paradictyoarthriniaeeae. Bootstrap support values for maximum likelihood (ML, left) higher than 50% and Bayesian posterior probabilities (BYPP, right) equal to or greater than 0.90 are indicated at the nodes, respectively. The sequences from ex-type strains are marked by a superscript symbol T. The newly generated sequence is written in red.

≡ *Arthrinium jiangxense* M. Wang & L. Cai, in Wang, Tan, Liu & Cai, MycoKeys 34(1): 14 (2018).

Saprobic on dead culms of *Phyllostachys heteroclada* Oliver. Sexual morph: Ascostromata 575–1334 × 274–444 × 134–157 µm (x = 876 × 355 × 143 µm, n = 30), solitary to gregarious, multi-loculate, immersed, fusiform to ellipsoid, black, with long axis broken at the top. *Peridium* 9.0–44 µm wide (x = 21 µm, n = 25), composed of several layers of brown to hyaline cells of *textura angularis* to *prismatica*. *Hamathecium* 4.0–11 µm wide, composed of dense,
long, septate, unbranched, paraphyses. *Ascii* 83–114 × 18–28 μm (μ = 104 × 23 μm, n = 50), 8–spored, unitunicate, broadly cylindrical to long clavate, with a short pedicel, slightly curved, apically rounded. *Ascospores* 32–37 × 9.6–11 μm (μ = 34 × 10 μm, n = 50), 2–seriate, 1–septate, elliptical, with a large, curved, upper cell and small lower cell, with narrowly rounded ends, hyaline, smooth-walled, with many guttules, surrounded by gelatinous sheath attached. *Asexual morph*: see Wang et al. [36].

Figure 5. *Apiospora hydei* (SICAU 22-0032). (a) Ascostromata developing on bamboo branches. (b) Vertical sections of ascostromata. (c) Peridium. (d) Paraphyses. (e,f) Asci. (g,h) Ascospores. (i) Germinating ascospore. (j,k) Cultures on PDA. Scale bars: (b) = 50 μm, (c–i) = 10 μm.

Material examined: China, Sichuan Province, Luzhou City, Xuyong District (27°53′28″ N, 105°16′36″ E, Alt. 1350 m), on dead culm of *Phyllostachys heteroclada*, 26 July 2021, Qian Zeng, ZQ202107133 (SICAU 22-0070), living culture SICAUCC 22-0070.

Culture characters: Ascospores germinate on PDA within 24 h. Colonies grow fast on PDA, reaching 6 cm after 1 week at 25 °C, under 12 h light/12 h dark, and are cottony, white, circular, with irregular edge.
Figure 6. *Apiospora jiangxiensis* (SICAU 22-0070). (a,b) Ascostromata developing on bamboo culm. (c) Vertical sections of ascostromata. (d) Peridium. (e) Paraphyses. (f–h) Asci. (i,j) Ascospores. (k) Germinating ascospore. (l,m) Cultures on PDA. Scale bars: (a) = 2 mm, (b) = 500 µm, (c) = 100 µm, (d–k) = 10 µm.

Notes: Specimen in our study shared similar morphology with the original description of *Apiospora jiangxiensis* by Wang et al. [36]. Nucleotide comparisons of ITS, LSU, and tub2 (SICAUCC 22-0070) showed high homology with the sequences of *Ap. jiangxiensis* (CGMCC 3.18381), similarities are 100% (541/541, 0 gaps), 99.09% (436/440, 0 gaps), and 98.22% (717/730, 0 gaps), respectively. However, the latter lack *tef1*-α sequences for further comparisons.

*Apiospora neosubglobosa* (D.Q. Dai & H.B. Jiang) Pintos & P. Alvarado, Fungal Systematics and Evolution 7: 206 (2021) (Figure 7).

≡ *Arthrinium neosubglobosum* D.Q. Dai & H.B. Jiang, Mycosphere 7(9): 1337 (2017).

Saprobic on dead culms of *Phyllostachys bissetii* McClure. Sexual morph: Ascostromata 330–1092 × 198–354 × 134–224 µm (x = 632 × 250 × 174 µm, n = 30), gregarious, immersed, multi-loculate, fusiform to ellipsoid, dark brown to black, with long axis broken at the top. Peridium 17.0–46 µm wide (x = 19 µm, n = 25), composed of several layers of brown to hyaline, cells of *textura angularis* to *prismatica*. Hamathecium 3.5–6.0 µm wide, composed of dense, long, septate, unbranched, paraphyses. Asci 94–137 × 23–40 µm (x = 125 × 31 µm, n = 50), 8-spored, unitunicate, broadly cylindrical to long clavate, with a short pedicel, slightly curved, apically rounded. Ascospores 28–36 × 13–15 µm (x = 32 × 14 µm, n = 50), 2–seriate, 1–septate, elliptical, with a large, curved, upper cell and small lower cell, with
narrowly rounded ends, hyaline, smooth-walled, with many guttules, surrounded by gelatinous sheath attached. *Asexual morph*: see Dai et al. [16].

**Figure 7.** *Apiospora neosubglobosa* (SICAU 22-0071). (a,b) Ascostromata developing on bamboo culm. (c) Vertical sections of ascostromata. (d) Peridium. (e) Paraphyses. (f–h) Asci. (i) Ascospores. (j) Germinating ascospore. (k,l) Cultures on PDA. Scale bars: (a) = 2 mm, (b) = 500 µm, (c) = 50 µm, (d–j) = 10 µm.

Material examined: CHINA, Sichuan Province, Luzhou City, Xuyong District (27°52′5″ N, 105°16′23″ E, Alt. 1470 m), on dead culm of *Phyllostachys bissetii*, 26 July 2021, Qian Zeng, ZQ202107128 (SICAU 22-0071), living culture SICAUCC 22-0071.

Cultural characters: Ascospores germinate on PDA within 24 h. Colonies grow fast on PDA, reaching 4 cm after 1 week at 25 °C, under 12 h light/12 h dark, and are cottony, circular, initially white, then brown, with regular edge.

Notes: *Apiospora neosubglobosa* was described by Dai et al. based on the morphological characteristics and molecular phylogeny [16]. Strain SICAUCC 22-0071 clustered with ex-type strain (JHB007) with high bootstrap support (100% ML and 1.00 BYPP). Nucleotide comparisons of ITS and LSU (SICAUCC 22-0071) showed high homology with the sequences of *Ap. neosubglobosa* (JHB007), similarities are 99.84% (649/650, 0 gaps), 100% (1173/1173, 0 gaps), respectively.

*Apiospora yunnana* (D.Q. Dai & K.D. Hyde) Pintos & P. Alvarado, Fungal Systematics and Evolution 7: 207 (2021) (Figure 8).
Figure 8. *Apiospora yunnana* (SICAU 22-0072). (a,b) Ascostromata developing on bamboo culm. (c) Vertical sections of ascostromata. (d) Peridium. (e) Paraphyses. (f–h) Asci. (i,j) Ascospores. (k) Germinating ascospore. (l,m) Cultures on PDA. Scale bars: (a) = 2 mm, (b) = 500 µm, (c) = 100 µm, (d–f) = 10 µm, (g–k) = 20 µm.

≡ *Arthrinium yunnanum* D.Q. Dai & K.D. Hyde, Fungal Diversity 82: 69 (2016).

Saprobic on culms of *Phyllostachys aurea* Carr. ex A. et C. Riv. Sexual morph: Ascostromata 624–1307 × 253–510 × 165–211 µm (\( \bar{X} = 892 \times 359 \times 188 \) µm, \( n = 30 \)), gregarious, multiloculate, immersed, fusiform to ellipsoid, black, with long axis broken at the top. Peridium 8.5–43 µm wide (\( \bar{X} = 17 \) µm, \( n = 25 \)), composed of several layers of brown to hyaline cells of textura angularis to prismatica. Hamathecium 3.5–8.0 µm wide, composed of dense, long, septate, unbranched paraphyses. Asci 89–144 × 18–40 µm (\( \bar{X} = 120 \times 32 \) µm, \( n = 50 \)), 8–spored, unitunicate, broadly cylindrical to long clavate, no pedicel, slightly curved, apically rounded. Ascospores 30–42 × 10–13 µm (\( \bar{X} = 36 \times 12 \) µm, \( n = 50 \)), 2–seriate, 1–septate, elliptical, with a large, curved, upper cell and a small lower cell, with narrowly rounded ends, hyaline, smooth-walled, with many guttules, surrounded by gelatinous sheath attached. Asexual morph: see Dai et al. [16].

Material examined: China, Sichuan Province, Yibin City, Changning District (28°28′8″ N, 105°0′16″ E, Alt. 890 m), on dead culm of *Phyllostachys aurea*, 23 July 2021, Qian Zeng, ZQ202107027 (SICAU 22-0072), living culture, SICAUCC 22-0072.

Culture characters: Ascospores germinate on PDA within 24 h and germ tubes produced from sides. Colonies grow fast on PDA, reaching 6 cm after 1 week at 25 °C, under 12 h light/12 h dark, and are cottony, circular, and white with irregular edge.
Notes: The sexual and asexual morph of *Apiospora yunnana* was reported by Dai et al. [16]. Morphologically, our observations were identical to the sexual descriptions provided by Dai et al. [16]. Nucleotide comparisons of ITS and LSU (SICAUCC 22-0072) showed high homology with the sequences of *Ap. yunnana* (MFLUCC 15-0002), similarities are 99.85% (667/668, 0 gaps), 100% (847/847, 0 gaps), respectively. However, the latter lack *tef1-α* and *tub2* sequences for further comparisons.

Magnaporthales Thongkantha, Vijaykrishna & K.D. Hyde. Fungal Diversity. 34: 157–173 (2009).

Magnaporthaceae P.F. Cannon, Systema Ascomycetum 13: 26 (1994).

*Bifusisporella* R.M.F. Silva, R.J.V. Oliveira, J.D.P. Bezerra, J.L. Bezerra, C.M. Souza-Motta & G.A. Silva, Mycological Progress 18(6): 852 (2019).

Type species: *Bifusisporella sorghi* R.M.F. Silva, R.J.V. Oliveira, J.D.P. Bezerra, J.L. Bezerra, C.M. Souza-Motta & G.A. Silva.

Description: Endophytic and parasitic fungi on Poaceae. Sexual morph: Ascomata separate or gregarious, subglobose, black, coriaceous, semi-immersed, unilocular or multilocular. *Peridium* with hyaline to brown cells of *textura angularis*. *Hamathecium* hyaline, with distinct septa, wider at the base, tapering towards the apex. *Asci* 8–spored, cylindrical, with a J-, apical ring, developing from the base and periphery of the ascomata, with a short pedicel. *Ascospores* biseriate, hyaline, fusiform, with distinct septa, with narrowly rounded ends, without appendages.

Asexual morph: Found in *Bifusisporella sorghi* cultures by Silva et al. [42].

Notes: *Bifusisporella* was introduced as a new genus to accommodate *B. sorghi* based on morphology and phylogeny. At present, *Bifusisporella* comprises only the ex-type species *B. sorghi*, and no records on its sexual morph. The new species *B. sichuanensis* is well-supported within *Bifusisporella*, which suggests that there is a need to amend the morphological circumscriptions of the genus.

*Bifusisporella sichuanensis* Q. Zeng, Y.C. Lv & C.L. Yang, sp. nov. (Figure 9).

Index Fungorum: IF559625

Etymology: Refers to the region from where the fungus was collected.

Holotype: SICAU 22-0073

Parasitic on living leaves of *Phyllostachys edulis* (Carriere) J. Houzeau. Sexual morph: Ascostromata 536–1672 × 332–849 × 125–245 μm (x = 1103 × 591 × 193 μm, n = 30), separate or gregarious, subglobose, black, coriaceous, semi-immersed, unilocular or multilocular, glabrous. *Peridium* 14–34 μm wide (x = 20 μm, n = 30), composed of 3–9 layers, with hyaline to brown cells of *textura angularis*. *Hamathecium* hyaline, cellular, with distinct septa. *Asci* 79–126 × 9.5–13 μm (x = 99 × 11 μm, n = 30), 8–spored, bitunicate, cylindrical, with an apical chamber and a short pedicel. *Ascospores* biseriate, hyaline, fusiform, with distinct septa, with narrowly rounded ends, overlapping, biseriate, hyaline, fusiform, 3–septate, rarely constricted at septate, with narrowly rounded ends, smooth-walled, guttules, without gelatinous sheath. Asexual morph: Undetermined.

Material examined: China, Sichuan Province, Yibin City, Xingwen District (28°15′22″ N, 105°6′29″ E, Alt. 850 m), on living to nearly dead leaves of *Phyllostachys edulis*, 25 July 2021, Qian Zeng, ZQ202107111 (SICAU 22-0073 holotype), ex-type living culture, SICAUCC 22-0073.

Culture characters: Ascospores germinate in sterilized water within 12 h at 25 °C. Colonies grow slow on PDA, reaching approximately 2 cm in 30 days at 25 °C, under 12 h light/12 h dark, and are irregular, black, frilly with white margin, and black on the back of colonies.

Notes: *Bifusisporella sichuanensis* is phylogenetically close (100% ML and 1.00 BYPP) to *B. sorghi* (URM 7442) introduced by Silva et al. [42], which is described with asexual morph. However, striking base-pair differences are noted, viz. 11.43% (55/481, 0 gaps), 3.36% (27/803, 0 gaps), 5.11% (24/469, 0 gaps), 9.04% (64/708, 0 gaps) in the ITS, LSU, *tef1-α* and *rpb1*, respectively. Hence, our collection is proposed as a new species.
Figure 9. *Bifusisporella sichuanensis* (SICAU 22-0073). (a,b) Ascostromata developing on the host. (c) Vertical sections of ascostromata. (d) Peridium. (e) Pseudoparaphyses. (f-i) Asci. (j) Ascospores. (k) Germinating ascospore. (l,m) Cultures on PDA. Scale bars: (b) = 500 µm, (c) = 100 µm, (d-k) = 10 µm.

Pleosporales Luttr. ex M.E. Barr, Prodromus to class Loculoascomycetes: 67 (1987).
Phaeosphaeriaceae M.E. Barr, Mycologia 71: 948 (1979).
*Paralloneottiosporina* Q. Zeng, Y.C. Lv & C.L. Yang, gen. nov.
Index Fungorum: IF559626.
Type species: *Paralloneottiosporina sichuanensis* Q. Zeng, Y.C. Lv & C.L. Yang.
Etymology: Name reflects the morphological similarity to the genus *Alloneottiosporina*.

Parasitic on living to nearly dead leaves of *Phyllostachys violascens* ‘Prevernalis’ S.Y. Chen et C.Y. Yao. Sexual morph: Ascomata visible as raised to superficial on host, gregarious, globose to subglobose or dome shape, dark brown to black, unilocular, glabrous. Ostiole single, circular, centrally located. Peridium multi-layered, brown to dark brown cells of textura angularis. Hamathecium hyaline, numerous, septate, often constricted at septa. Asci 8-spored, bitunicate, rounded at apex, cylindrical, curved, with a short pedicel. Ascospores hyaline, fusiform, 1–2 septate, constricted at the septum, guttules, smooth-walled, with narrowly rounded ends. Asexual morph: Conidiomata brown to dark brown, globose to long ellipsoid, coriaceous, semi-immersed, unilocular, gregarious, glabrous. Conidiomatal wall comprising multi-layered, dark brown to black cells of textura angularis. Conidia ellipsoid to ovoid, 1–septate, slightly constricted at the septum, smooth-walled, hyaline, with a rounded apex and a truncated base, guttules.

Notes: *Paralloneottiosporina* resembles *Alloneottiosporina* in asexual status having semi-immersed, unilocular, gregarious, glabrous conidiomata, but *Paralloneottiosporina* differs in absent of microconidia, conidia without mucoid appendages, bigger conidia, fewer layers of
conidiomatal wall. The macroconidia of *Alloneottiosporina* species are usually accompanied with mucoid appendages at both ends, and microconidia are produced near the ostiolar channel. Moreover, colonies are whitish to bright orange-pink on PDA in *Paralloneottiosporina*, but olivaceous-black in *Alloneottiosporina* [43]. Based on morphological characteristics and molecular phylogeny, the new genus is introduced in Phaeosphaeriaceae.

*Paralloneottiosporina sichuanensis* Q. Zeng, Y.C. Lv & C.L. Yang, sp. nov. (Figures 10 and 11).

**Figure 10.** *Paralloneottiosporina sichuanensis* (SICAU 22-0074, holotype). (a,b) Ascostromata developing on the host. (c) Vertical sections of ascostromata. (d) Peridium. (e–g) Asci. (h) Ascospores. (i) Germinating ascospore. (j,k) Cultures on PDA. Scale bars: (a) = 1 mm, (b) = 500 µm, (c,d) = 20 µm, (e–i) = 10 µm.

Index Fungorum: IF559627.

Etymology: In reference to Sichuan Province where the specimens were collected.

Holotype: SICAU 22-0074.

Associated with leaf blight on living to nearly dead leaves of *Phyllostachys violascens* (Poaceae). *Sexual morph: Ascomata* 106–343 × 39–196 × 55–112 µm (x = 168 × 111 × 89 µm, n = 30), separate, gregarious to confluent, globose to subglobose, dark brown to black, superficial, unilocular, glabrous. *Ostiole* single, circular, centrally located. *Peridium* 17–38 µm wide (x = 29 µm, n = 30), composed of 7–12 layers, with brown cells of *textura angularis*. *Hamathecium* hyaline, dense, cellular, with distinct septa. *Asci* 49–97 × 8.5–19 µm (x = 71 × 13 µm, n = 30), 8-spored, bitunicate, cylindrical, curved, with a short pedicel. *Ascospores* 15–21 × 5.0–7.5 µm (x = 18 × 6.0 µm, n = 50), overlapping biseriate, straight, hyaline, fusiform, 1–2 septate, constricted at the septum, smooth-walled, with narrowly rounded ends. *Asexual morph: Conidiomata* 90–191 × 61–132 × 81–123 µm (x = 132 × 102 × 105 µm, n = 30), globose to long ellipsoid, coriaceous, semi-immersed, black, unilocular, gregarious, glabrous. *Conidiomatal wall* 7.5–21 µm wide (x = 13 µm), comprising 3–6 layers, brown cells of *textura angularis*. *Conidiophores* reduced to conidiogenous cells. *Conidiogenous cell* 3.0–6.5 × 2.5–5.0 µm (x = 5.0 × 3.5 µm, n = 20), hyaline, ampulliform to subcylindrical, smooth. *Conidia* 11–20 × 4.0–6.5 µm (x = 17 × 5.0 µm, n = 50), ellipsoid to ovoid, 1–septate,
slightly constricted at the septum, smooth-walled, hyaline, with a rounded apex and a
truncated base.

Figure 11. *Paralloneottiosporina sichuanensis* (SICAU 22-0075, paratype). (a, b) Conidiomata on the host. (c) Vertical sections of conidiomata. (d) Peridium. (e) Conidiogenous cells and developing conidia. (f) Conidia. (g) Germinating conidium. (h, i) Cultures on PDA. Scale bars: (a) = 500 µm, (b) = 200 µm, (c) = 20 µm, (d–g) = 10 µm.

Material examined: China, Sichuan Province, Ya’an City, Yucheng District (29°56’49.54” N, 102°56’46.03” E, Alt. 807 m), on living to nearly dead leaves of *Phyllostachys violascens*, 13 May 2020, Qian Zeng, ZQ202005002 (SICAU 22-0074, holotype), ex-type living culture, SICAUCC 22-0074; CHINA, Sichuan Province, Qionglai City, Linjiang Town (30°19’4.42” N, 103°17’23.06” E, Alt. 518 m), on living leaves of *P. violascens*, 8 November 2020, Qian Zeng, ZQ202011012 (SICAU 22-0075, paratype), living culture, SICAUCC 22-0075.

Culture characteristics: Ascospores germinate in sterilized water within 24 h at 25 °C. Colonies grow slow on PDA, reaching approximately 2.5 cm in 30 days at 25 °C, circular, white aerial mycelium, whitish to bright orange-pink on the surface, and brown on the back.

Pleosporales Luttr. ex M.E. Barr, Prodromus to class Loculoascomycetes: 67 (1987).

Bambusicolaceae D.Q. Dai & K.D. Hyde, Fungal Diversity. 63 (1): 49 (2013).

*Seriascoma yunnanense* Rathnayaka & K.D. Hyde, Asian Journal of Mycology 2(1): 250 (2019) (Figure 12).

Saprobic on dead culm of *Phyllostachys edulis* (Carriere) J. Houzeau. Sexual morph: *Ascostronata* 110–200 × 120–150 × 120–140 µm (x = 160 × 140 × 130 µm, n = 20), solitary to gregarious, immersed, globose to subglobose, coriaceous, dark brown to black. *Peridium* 12–26 µm wide (x = 4.0 µm, n = 20), composed of 4–9 layers of brown to hyaline cells of *textura angularis*. *Hamathecium* 1.5–2.0 µm wide, composed of dense, branched, long, septate. *Asci* 52–80 × 12–16 µm, (x = 60 × 14 µm, n = 50), 8-spored, bitunicate, broadly cylindrical, with a short pedicel, straight or slightly curved, with an apical chamber. *Ascosporas* 20–30 × 6.0–7.5 µm (x = 23 × 7.0 µm, n = 50), 2–seriate, 1–septate, slightly constricted at the
septum, fusiform, narrowly acute at both ends, straight to curved, hyaline, smooth-walled, surrounded by a gelatinous sheath. 

*Asexual morph*: Undetermined.

**Figure 12.** *Seriascoma yunnanense* (SICAU 22-0059). (a,b) Ascostromata developing on the host. (c) Vertical sections of ascostromata. (d) Peridium. (e) Pseudoparaphyses. (f–h) Asci. (i,j) Ascospores. (k) Germinating ascospore. (l,m) Cultures on PDA. Scale bars: (c) = 50 µm, (d–k) = 10 µm.

Material examined: China, Sichuan Province, Chengdu City, Jin’niu District (30°45'57" N, 104°7'34" E, Alt. 539 m), on dead culm of *Phyllostachys edulis*, 8 April 2021, Yicong Lv, LYC202104043 (SICAU 22-0059), living culture SICAUCC 22-0059.

Culture characteristics: Ascospores germinate in sterile water within 12 h at 25 °C. Colonies grow slowly on PDA, and reach 6 cm after 30 days at 25 °C, circular, brown to dark brown.

Notes: On the morphology, our observations were identical to the descriptions of *Seriascoma yunnanense* provided by Rathnayaka et al. [44]. Nucleotide comparisons of SSU, LSU, tef1-α and rpb2 (SICAUCC 22-0059) showed high homology with the sequences of *S. yunnanense* (MFLU 19-0690), similarities are 98.37% (847/861, 0 gaps), 100% (841/841, 0 gaps), 96.59% (396/410, 0 gaps), 99.65% (855/858, 0 gaps), respectively. We report our collection as *S. yunnanense*.

4. Discussion

In this study, we confirmed seven species of saprophyte or parasitism from leaves and culms of *Phyllostachys*, corresponding to four genera. Microfungi are abundant on culms
and leaves of bamboo as pointed out by Dai et al. [45]. Ascomycetes are the most abundant species on bamboo, with about 1150 taxa having been recorded [45]. Furthermore, the number of saprophytic fungi is more than that of pathogenic fungi [16,36].

The genus *Apiospora* Sacc. was recognized and described by Saccardo considering *Ap. montagnei* designated as the type species [46]. *Apiospora* has been widely accepted as a synonym for *Arthrinium* after Ellis [47]. Crous and Groenewald combined *Apiospora* species to be sexual morphs of *Arthrinium* species and synonymized under *Arthrinium* [40]. However, Pintos and Alvarado found that the morphological and ecological differences between *Apiospora* and *Arthrinium* are sufficient to support the taxonomic separation of the two genera. As a result, fifty-five species of *Arthrinium* were combined to *Apiospora* [48]. In this study, given the phylogenetic analysis with species of *Apiospora* and *Arthrinium*, in which 10 species of *Arthrinium* (*Ar. agari, Ar. arctoscopi, Ar. fermenti, Ar. koreanum, Ar. mori, Ar. phaeospermum, Ar. pusillispermum, Ar. sargassi, Ar. taeanense, Ar. marinum*) are clustered in a well-supported clade within *Apiospora*, future studies are needed to better understand the combination of previous *Arthrinium* species with *Apiospora*. *Apiospora* species have a worldwide distribution and can be found on various hosts. Most species occurred on the plants in Poaceae, although some were known from Amaranthaceae, Juncaceae, Euphorbiaceae, Cyperaceae, Restionaceae, Fagaceae, even seaweeds [48,49]. To date, more than 25 species have been found on bamboo, most species were saprobic on dead bamboo culms, and a few species have been reported as pathogens. For example, *Ap. arundinis* causes brown culm streak of *Phyllostachys praecox*, and *Ap. kogelbergensis* causes blight disease of *Bambusa intermedia* [16,41,50,51]. *Apiospora. hydei*, *Ap. neosubglobosa*, and *Ap. jiangxiensis* were saprophytic on unidentified bamboo culms and leaves [41,52]. *Apiospora yunnanensis* has been reported on bamboo culms of *Phyllostachys nigra* and *P. heteroclada*, which can cause bamboo blight disease of *P. heteroclada* [53,54]. In this study, four known species, *Apiospora hydei*, *Ap. neosubglobosa*, *Ap. jiangxiensis*, and *Ap. yunnanensis*, were newly recorded on *Phyllostachys nigra*, *P. heteroclada*, *P. bisetti*, and *P. aurea* respectively.

At present, *Bifusisporella* only comprises the ex-type species *B. sorgi*. In this study, we provide taxonomic details for another new species, *B. sichuanensis*, that was collected from living leaves of *Phyllostachys edulis*. *B. sorgi* was isolated as an endophyte from healthy sorghum leaves in Brazil by Silva et al. [42]. However, *B. sichuanensis* is pathogenic, causing tar spot on bamboo leaves. In addition, the sexual stage in this genus is supplemented.

Phaeosphaeriaceae is one of the most important and species-rich families in Pleosporales with diverse lifestyles [55,56], and may be found on herbaceous stems or monocotyledonous culms, branches, leaves, flowers, and woody substrates [57,58]. Currently, more than 70 genera are accommodated in Phaeosphaeriaceae [59]. Most genera in this family were introduced as monotypic genera, such as *Acericola, Banksiophoma, Bhagirathimyces, Bhatiellae, Brunneomurispora, Camarosporioides, Elongaticollum, Equiseticola, Hydeopsis, Jeremyomyces, Mauginiella, Melnikia, Neophiobolus, Neosphaerellopsis, Neostagonospora, Ophiobolopsis, and Parastagonospora*, among others. Due to these genera being represented by a single species, resulting in few samples that could be used for taxon, the phylogenetic relationships with the related genera are sometimes not well-resolved. Based on morphological characteristics and multigene phylogey, a novel genus, *Paralloneottiosporina*, is introduced to accommodate *Pa. sichuanensis* sp. nov. According to the field investigation, *Pa. sichuanensis* can cause leaf blight that eventually leads to leaf necrosis and plant decline in severe cases. Besides *Ph. violascens*, leaf blight caused by *Pa. sichuanensis* has also been observed on *P. heterocycla* and *P. tianmuensis*. This indicates that *Pa. sichuanensis* may be a common parasitic fungus on bamboos.

As only three species are accommodated within *Seriascoma*, more research is also needed for better understanding this genus [60]. *Seriascoma* is presently known as saprobic on decaying wood and dead bamboo in the terrestrial or freshwater habitats distributed in China and Thailand [16,44,61,62]. *Seriascoma. yunnanense* is found on dead branches of bamboo in Yunnan. In this study, *S. yunnanense* was saprophytic on *Phyllostachys edulis*.
The previous studies have revealed a high fungal diversity associated with bamboo *Phyllostachys*. In recent years, 10 species belonging to seven genera have been described from bamboo of *Phyllostachys*, including two new genera, *Neostagonosporella* and *Parakarstennia*, established by Yang et al. on *P. heteroclada* in Sichuan Province [54,58,63–69]. However, the knowledge about bambusicolous fungi is incomplete and mainly remains at cataloguing stage [14]. The previous studies of identification were mostly based on morphological characteristics, and lacked molecular data. Moreover, their hosts were poorly documented or unknown [70], and specimens were absent for further re-examination. Therefore, these species need to be recollected, epitypified, and sequenced [10], and new species need to be discovered and described.

**Author Contributions:** Q.Z. and C.-L.Y.: conceptualization. Q.Z.: data curation. Q.Z. and Y.-C.L.: formal analysis, methodology, and writing—original draft. Q.Z., Y.-C.L., Y.D. and F.-H.W.: investigation. C.-L.Y. and Y.-G.L.: project administration. C.-L.Y. and X.-L.X.: supervision. C.-L.Y., X.-L.X., S.-Y.L. and L.-J.L.: writing—review and editing. All authors contributed to the article and approved the submitted version. All authors have read and agreed to the published version of the manuscript.

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**Data Availability Statement:** The datasets presented in this study can be found in the NCBI GenBank (https://www.ncbi.nlm.nih.gov/), Index Fungorum (http://www.indexfungorum.org/Names/Names.asp) (all accessed on 8 May 2022).

**Conflicts of Interest:** The authors declare no conflict of interest.
Appendix A. Molecular Data Used in This Study and GenBank Accession Numbers

| Species                  | Strains                  | GenBank Accession Numbers |
|--------------------------|--------------------------|---------------------------|
|                          |                          | ITS | LSU | tub2 | tef1-a | rpb1 | SSU | rpb2 | References |
| Apiospora acutiapica     | KUMCC 20-0209            | MT946342 | MT946338 | – | – | – | – | – | [71] |
| Apiospora acutiapica     | KUMCC 20-0210            | MT946343 | MT946339 | – | – | – | – | – | [71] |
| Apiospora aquaticum      | MFLU 18-1628 T           | MK828608 | MK835806 | – | – | – | – | – | [55] |
| Apiospora arundinis      | CBS 114316               | KF144884 | KF144928 | KF144974 | KF145016 | – | – | – | [40] |
| Apiospora arundinis      | CBS 450.92               | AB220259 | – | AB220306 | – | – | – | – | [71] |
| Apiospora arundinis      | AP1118A                  | MK014868 | MK014835 | MK017974 | MK017945 | – | – | – | [72] |
| Apiospora aurereum       | CBS 244.83 T             | AB220251 | KF144935 | KF144981 | KF145023 | – | – | – | NCBI |
| Apiospora baiarica       | CBS 145129 T             | MK014869 | MK014836 | MK017975 | MK017946 | – | – | – | [72] |
| Apiospora bambusicola    | MFLUCC 20-0144 T         | MW173030 | MW173087 | – | MW183262 | – | – | – | [73] |
| Apiospora biserialis     | CGMCC 3.20135 T          | MW481708 | – | MW522955 | MW522938 | – | – | – | [52] |
| Apiospora camelliae-sinensis | LC5007 T               | KF944704 | KF944780 | KF705173 | KF705103 | – | – | – | [36] |
| Apiospora camelliae-sinensis | LC8181                | KF944761 | KF944837 | KF705229 | KF705157 | – | – | – | [36] |
| Apiospora chiangraenise  | MFLU:21-0046            | MZ542520 | MZ542524 | MZ546409 | – | – | – | – | [49] |
| Apiospora chromolaenaenae | MFLUCC 17-1505 T         | MT214342 | MT214436 | – | – | – | – | – | [74] |
| Apiospora cyclobalanopsidis | CGMCC 3.20136 T         | MW481713 | – | MW522962 | MW522945 | – | – | – | [52] |
| Apiospora descalsii      | CBS 145130 T            | MK014870 | MK014837 | MK017976 | MK017947 | – | – | – | [72] |
| Apiospora dichotomanthi  | CGMCC 3.18332 T         | KY944697 | KY944832 | KY705167 | KY705096 | – | – | – | [36] |
| Apiospora dichotomanthi  | LC8175                  | KY944735 | KY944831 | KY705223 | KY705151 | – | – | – | [36] |
| Apiospora esporlensis    | CBS 145136 T            | MK014878 | MK014845 | MK017983 | MK017954 | – | – | – | [72] |
| Apiospora euphoriae      | IMI 285638b             | AB220241 | – | AB220288 | – | – | – | – | [71] |
| Apiospora gaeyouensis    | CFCC 52301              | MH917124 | – | MH236789 | MH236793 | – | – | – | [53] |
| Apiospora gaeyouensis    | CFCC 52302              | MH9217125 | – | MH236790 | MH236794 | – | – | – | [53] |
| Apiospora garthjonesii   | JHB004                  | KF356086 | KF356091 | – | – | – | – | – | [41] |
| Apiospora garthjonesii   | HKAS 96289 T            | NR_154736 | NG_057131 | – | – | – | – | – | [41] |
| Apiospora gelatinosa     | HKAS:111962             | – | – | – | – | – | – | – | [52] |
| Apiospora guizhouensis   | LC5318                  | KY944708 | KY944784 | KF705177 | KF705107 | – | – | – | [36] |
| Apiospora guizhouensis   | CGMCC 3.18334 T = LC5322 | KY944709 | KY944785 | KF705178 | KF705108 | – | – | – | [36] |
| Apiospora hispanica      | IMI 326877              | AB220242 | AB220336 | AB220289 | – | – | – | – | [71] |
| Apiospora hydeci         | CBS 114990 T            | KF144890 | KF144936 | KF144982 | KF145024 | – | – | – | [40] |
| Apiospora hydeci         | KUMCC 16-0204           | KY356087 | KY356092 | – | – | – | – | – | [41] |
| Apiospora hydeci         | SICAUCC 22-0032         | ON183998 | ON185553 | ON221313 | ON221312 | – | – | – | This study |
| Apiospora hypophodii     | MFLUCC 15-003 T         | KR069110 | KR069111 | – | – | – | – | – | [75] |
| Species                  | Strains                  | GenBank Accession Numbers |
|-------------------------|--------------------------|---------------------------|
|                         |                          | **ITS** | **LSU** | **tub2** | **tef1-a** | **rpb1** | **SSU** | **rpb2** | **References** |
| *Apiospora hyphopodii*  | KUMCC 16-0201            | KY356088 | KY356093 | –        | –          | –        | –        | –        | [41]            |
| *Apiospora hysterina*   | AP15318                  | MK014873 | MK014840 | MK017979 | MK017950  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | ICPM6889                 | MK014874 | MK014841 | MK017980 | MK017951  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | AP29717                  | MK014875 | MK014842 | MK017981 | MK017952  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | AP2410173                | MK014876 | MK014843 | –        | –          | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | AP12118                  | MK014877 | MK014844 | MK017982 | MK017953  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | CBS 145132 \(^T\)        | MK014879 | MK014846 | MK017984 | MK017955  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | CBS 135835 \(^T\)        | KRO11352 | MH877577 | KRO11350 | KRO11351  | –        | –        | –        | [76]            |
| *Apiospora hysterina*   | CBS 145138 \(^T\)        | MK014880 | MK014847 | MK017985 | MK017956  | –        | –        | –        | [72]            |
| *Apiospora hysterina*   | AP2210137 \(^T\)         | MK014881 | MK014848 | MK017986 | MK017957  | –        | –        | –        | [72]            |
| *Apiospora jagropheae*  | CBS 134262 \(^T\)        | NR_154675 | –        | –        | –          | –        | –        | –        | [77]            |
| *Apiospora jagropheae*  | MMI 00051 = CBS:134262   | JQ246355 | –        | –        | –          | –        | –        | –        | [77]            |
| *Apiospora jiangxiensis*| CGMCC 3.18381 \(^T\)     | KY494693 | –        | KY705163 | KY705092  | –        | –        | –        | [36]            |
| *Apiospora jiangxiensis*| LC5478                   | KY494694 | KY494770 | KY705164 | KY705093  | –        | –        | –        | [36]            |
| *Apiospora jiangxiensis*| SICAUCC 22-0070          | ON227094 | ON227098 | ON244342 | ON244341  | –        | –        | –        | This study      |
| *Apiospora kogelbergensis*| CBS 113332              | KF144891 | KF144937 | KF144983 | KF145025  | –        | –        | –        | [40]            |
| *Apiospora kogelbergensis*| CBS 113333 \(^T\)        | KF144892 | KF144938 | KF144984 | KF145026  | –        | –        | –        | [40]            |
| *Apiospora kogelbergensis*| CBS 113335              | KF144893 | KF144939 | KF144985 | KF145027  | –        | –        | –        | [40]            |
| *Apiospora kogelbergensis*| CBS 117206              | KF144895 | KF144941 | KF144987 | KF145029  | –        | –        | –        | [40]            |
| *Apiospora locuta-pollinis*| LC11683                 | MF939595 | –        | MF939622 | MF939616  | –        | –        | –        | [78]            |
| *Apiospora longistroma* | MFLUCC 11-0479           | KU940142 | KU863130 | –        | –          | –        | –        | –        | [16]            |
| *Apiospora longistroma* | MFLUCC 11-0481           | KU940141 | KU863129 | –        | –          | –        | –        | –        | [16]            |
| *Apiospora longistroma* | MFLU 15-1184 \(^T\)      | NR_154716 | –        | –        | –          | –        | –        | –        | [16]            |
| *Apiospora malaysiana*  | CBS 102053 \(^T\)        | KF144896 | KF144942 | KF144988 | KF145030  | –        | –        | –        | [40]            |
| *Apiospora marii*       | CBS 497.90               | KF144891 | KF144937 | KF144983 | KF145025  | –        | –        | –        | [40]            |
| *Apiospora mediterranea*| IMI 326875               | KF144892 | KF144938 | KF144984 | KF145026  | –        | –        | –        | [40]            |
| *Apiospora minutispora* | CBS 1358133 \(^T\)       | KF144893 | KF144939 | KF144985 | KF145027  | –        | –        | –        | [40]            |
| *Apiospora montagnei*   | CGMCC 3.18335 \(^T\)     | KY494718 | KY494794 | KY705186 | KY806204  | –        | –        | –        | [36]            |
| *Apiospora mytilomorpha*| DAOM 214595              | KY494685 | –        | –        | –          | –        | –        | –        | [36]            |
| *Apiospora neobambusae* | CGMCC 3.18335 \(^T\)     | KY494718 | KY494794 | KY705186 | KY806204  | –        | –        | –        | [36]            |
| *Apiospora neobambusae* | KUMCC 20-0207            | MT946346 | MT946340 | –        | –          | –        | –        | –        | [71]            |
| *Apiospora neobambusae* | LC7107                   | KY494719 | KY494795 | KY705187 | KY705117  | –        | –        | –        | [36]            |
| *Apiospora neochinensis*| CFCC 53037               | MK819292 | –        | MK818548 | MK818546  | –        | –        | –        | [81]            |
| Species                     | Strains                  | GenBank Accession Numbers                                                                 |
|-----------------------------|--------------------------|--------------------------------------------------------------------------------------------|
| *Apiospora neochinensis*    | CFCC 53036 T             | MK819291 – MK818547 – MK818545 – – – – – [81]                                               |
| *Apiospora neogarethjonesii*| HKAS 96354 T             | MK070897 – MK070898 – – – – – – – – – – – [82]                                               |
| *Apiospora neosubglobosa*  | JHB006                  | KY356089 – KY356094 – – – – – – – – – – – [41]                                               |
| *Apiospora neosubglobosa*  | JHB007 T                | KY356090 – KY356095 – – – – – – – – – – – [41]                                               |
| *Apiospora neosubglobosa*  | SICAUCC 22-0071          | ON227095 – ON227099 – ON244430 – ON244429 – – – – – This study                              |
| *Apiospora obovata*         | CGMCC 3.18331 T          | KY494696 – KY494834 – KY705166 – KY705095 – – – – – [41]                                   |
| *Apiospora ovata*           | LC8177                  | KY494757 – KY494833 – KY705225 – KY705153 – – – – – [41]                                   |
| *Apiospora ovata*           | CBS 115042 T             | KF144903 – KF144950 – KF144995 – KF145037 – – – – – [40]                                   |
| *Arthrinium paraphaeospermum* | NCYU 19-0341             | MW114315 – MW293936 – – MW288020 – – – – – NCB                                       |
| *Apiospora paraphaeosperma* | MFLUCC 13-0644 T        | KX822128 – KX822124 – – – – – – – – – – – [71]                                               |
| *Apiospora phragmitis*      | CPC 18900 T             | KF144909 – – KF145001 – KF145043 – – – – – – [40]                                           |
| *Apiospora phragmitis*      | AP2318                  | MK014891 – MK014858 – MK017996 – MK017967 – – – – – [72]                                   |
| *Apiospora phragmitis*      | AP2410172 A             | MK014890 – MK014857 – MK017995 – MK017966 – – – – – [72]                                   |
| *Apiospora phyllostachydis* | MFLUCC 18-1101           | – – – KF291949 – – – – – – – – – – [65]                                                   |
| *Apiospora piptatheri*       | CBS 145149 T            | MK014893 – MK014860 – – MK017969 – – – – – – [72]                                           |
| *Apiospora pseudoparenchymatica* | CCGMCC 3.18336 T       | KY494743 – KY494819 – KY705211 – KY705139 – – – – – [36]                                   |
| *Apiospora pseudoparenchymatica* | LC8173                | KY494753 – KY494829 – KY705221 – KY705149 – – – – – [36]                                   |
| *Apiospora pseudorasikravindrae* | KUMCC 20-0208 T        | MT946344 – – – – – – – – – – – – – – – [71]                                                 |
| *Apiospora pseudorasikravindrae* | KUMCC 20-0211           | MT946345 – – – – – – – – – – – – – – – – [71]                                               |
| *Apiospora pseudosinensis*  | CBS 135459 T            | KF144910 – KF144957 – – KF145044 – – – – – – – [40]                                       |
| *Apiospora pseudospogazzini* | CBS 102052 T            | KF144911 – KF144958 – KF145002 – KF145045 – – – – – – [40]                                 |
| *Apiospora pterosperma*     | CBS 123185              | KF144912 – KF144959 – KF145003 – – – – – – – – – – [40]                                   |
| *Apiospora pterosperma*     | CBS 134000 T            | KF144913 – KF144960 – KF145004 – KF145046 – – – – – – [40]                                 |
| *Apiospora qinlingensis*    | CFCC 52303 T            | MH197120 – – MH236791 – MH236795 – – – – – – – [53]                                       |
| *Apiospora qinlingensis*    | CFCC 52304              | MH197121 – – MH236792 – MH236796 – – – – – – – [53]                                       |
| *Apiospora rasikravindrae*  | NFCCI 2144 T            | KF144914 – – – – – – – – – – – – – – – – – – [83]                                           |
| *Apiospora rasikravindrae*  | MFLUCC 11-0616          | KU940144 – KU863132 – – – – – – – – – – – – – [16]                                         |
| *Apiospora rasikravindrae*  | LC5449                  | KY494713 – KY494789 – KY705182 – KY705112 – – – – – – [36]                                 |
| *Apiospora rasikravindrae*  | LC7115                  | KY494721 – KY494797 – KY705189 – KY705118 – – – – – – [36]                                 |
| Species               | Strains                      | GenBank Accession Numbers                                                                 |
|----------------------|------------------------------|--------------------------------------------------------------------------------------------|
|                      |                              | **ITS** | **LSU** | **tub2** | **tef1-a** | **rpb1** | **SSU** | **rpb2** | **References** |
| *Apiospora rasikravindrae* | KUC21351                    | MH498540 | MH498498 | MN868932 | –         | –        | –        | –        | [84]          |
| *Apiospora rasikravindrae* | KUC21327                    | MH498541 | MH498499 | MH544670 | –         | –        | –        | –        | [84]          |
| *Apiospora sacchari*    | CBS 212.30                   | KF144916 | KF144962 | KF145005 | KF145047 | –        | –        | –        | [40]          |
| *Apiospora sacchari*    | CBS 301.49                   | KF144917 | KF144963 | KF145006 | KF145038 | –        | –        | –        | [40]          |
| *Apiospora saccharicola*| CBS 191.73                   | KF144920 | KF144966 | KF145009 | KF145051 | –        | –        | –        | [40]          |
| *Apiospora saccharicola*| CBS 463.83                   | KF144921 | KF144968 | KF145010 | KF145052 | –        | –        | –        | [40]          |
| *Apiospora sasae*       | CBS 146808 T                 | MW883402 | MW883797 | MW890120 | MW890104 | –        | –        | –        | [85]          |
| *Apiospora septatum*    | CGMCC 3.20134 T             | MW461711 | –        | MW522960 | MW522943 | –        | –        | –        | [52]          |
| *Apiospora serenensis*  | IMI 326869 T                | AB220250 | –        | AB220297 | –        | –        | –        | –        | [71]          |
| *Apiospora setariae*    | ATCC 76309                   | AB220240 | –        | AB220287 | –        | –        | –        | –        | [71]          |
| *Apiospora setostroma*  | CFCC 54041                   | MT492004 | –        | MT497466 | MW118456 | –        | –        | –        | [86]          |
| *Apiospora sinensis*    | UNKNOW-1 = HKUCC 3143       | –        | –        | –        | –        | –        | –        | –        | NCBI          |
| *Apiospora sinensis*    | UNKNOW-2                     | –        | –        | DQ810215 | –        | –        | –        | –        | NCBI          |
| *Apiospora sorghi*      | URM<BR$,>9-9300              | MK371706 | –        | –        | –        | –        | –        | –        | NCBI          |
| *Apiospora stipae*      | CBS 146804                   | MW883403 | MW883798 | MW890121 | MW890105 | –        | –        | –        | [85]          |
| *Apiospora subglobosa*  | MFLUCC 11-0397 T             | KR069112 | KR069113 | –        | –        | –        | –        | –        | [75]          |
| *Apiospora subrosea*    | LC7291                       | KY494751 | KY494827 | KY705219 | KY705147 | –        | –        | –        | [36]          |
| *Apiospora subrosea*    | CGMCC3.18337 T               | KY494752 | KY494828 | KY705220 | KY705148 | –        | –        | –        | [36]          |
| *Apiospora thailandica* | MFLUCC 15-0199               | KU940146 | KU863134 | –        | –        | –        | –        | –        | [16]          |
| *Apiospora thailandica* | MFLUCC 15-0202 T             | KU940145 | KU863133 | –        | –        | –        | –        | –        | [16]          |
| *Apiospora thailandica* | LC5630                      | KY494714 | KY494790 | KY806200 | KY705113 | –        | –        | –        | [36]          |
| *Apiospora tintinnabula*| 7019-96 (ICMP)               | –        | –        | DQ810216 | –        | –        | –        | –        | [71]          |
| *Apiospora vietnamensis*| IMI 99670                    | KX986096 | KX986111 | KY019466 | –        | –        | –        | –        | [88]          |
| *Apiospora xenocordella*| CBS 478.86 T                 | KF144925 | KY494763 | –        | –        | –        | –        | –        | [40]          |
| *Apiospora xenocordella*| CBS 595.66                   | KF144926 | KF144971 | KF145013 | KF145055 | –        | –        | –        | [40]          |
| *Apiospora yunnana*     | MFLUCC 15-0002 T             | KU940147 | KU863135 | –        | –        | –        | –        | –        | [16]          |
| *Apiospora yunnana*     | SICAUCC 22-0072              | ON227096 | ON227100 | ON244426 | ON244425 | –        | –        | –        | This study    |
| *Arthrinium agari*      | KUC21364                     | MH498516 | –        | MH498474 | MN868917 | –        | –        | –        | [84]          |
| *Arthrinium arctoscopi* | KUC21347                     | MH498525 | –        | MH498483 | MN868922 | –        | –        | –        | [84]          |
| *Arthrinium fermenti*   | KUC21289                     | MFL15226 | –        | MFL15231 | MH544667 | –        | –        | –        | [84]          |
| *Arthrinium koreanum*   | KUC21350                     | MH498521 | –        | MH498479 | MN868929 | –        | –        | –        | [84]          |
| *Arthrinium marinum*    | KUC21328                     | MH498538 | –        | MH498496 | MH544669 | –        | –        | –        | [84]          |
Table A1. Cont.

| Species                          | Strains         | GenBank Accession Numbers | References |
|----------------------------------|-----------------|---------------------------|------------|
| **Arthrinium marinum**           | KUC21355        | MH498535 – MH498493 – MH498494 – MH498492 – MH498490 – MH498366 – MH498365 – GH498364 – [84] |
| **Arthrinium marinum**           | KUC21356        | MH498535 – MH498493 – MH498494 – MH498492 – MH498490 – MH498366 – MH498365 – GH498364 – [84] |
| **Arthrinium maro**              | KUC21354        | MH498535 – MH498493 – MH498494 – MH498492 – MH498490 – MH498366 – MH498365 – GH498364 – [84] |
| **Arthrinium mori**              | MFLU 18-2514    | MW114313 – MW114393 – MW114394 – MW114395 – [89] |
| **Arthrinium phaeospermum**      | CBS 114315      | KF144905 – KF144952 – KF144953 – KF144954 – [40] |
| **Arthrinium phaeospermum**      | CBS 114317      | KF144907 – KF144949 – KF144950 – KF144951 – [40] |
| **Arthrinium phaeospermum**      | CBS 114318      | KF144907 – KF144952 – KF144953 – KF144954 – [40] |
| **Arthrinium pusillispermum**    | KUC21357        | MH498532 – MH498490 – MH498366 – MH498365 – GH498364 – [84] |
| **Arthrinium sargassi**          | KUC21232        | KT207750 – KT207648 – MH544676 – MH544675 – [84] |
| **Pestalotiopsis chamaeropis**   | CBS 237.38      | MH855954 – MH867450 – KM199392 – KM199474 – [76] |
| **Pestalotiopsis colombiensis**  | CBS 118553 T    | KM199307 – KM116222 – KM199421 – KM199488 – [90] |
| **Bambusicularia brunnea**       | CBS 133599 T    | KM484830 – KM484948 – KM485043 – [91] |
| **Bambusicularia brunnea**       | CBS 133600      | AB274436 – KM484974 – KM485044 – [91,92] |
| **Barretomyces calatheae**        | CBS 129274 = CPC 18464 | KM484831 – KM484950 – KM484951 – KM485045 – [76] |
| **Bifusisporella sichuanensis**  | SICAUCC 22-0073 T | ON227097 – ON227101 – ON244427 – ON244428 – This study |
| **Bifusisporella sorghi**         | URM 7442 T      | MK060155 – MK060154 – MK060153 – MK060152 – MK060151 – MK060150 – [42] |
| **Bifusisporella sorghi**         | URM 7864        | MK060151 – MK060150 – MK060149 – MK060148 – MK060147 – MK060146 – [42] |
| **Bussabamycetes longisporis**   | CBS 125232 T    | KM484832 – KM484951 – KM090202 – KM485046 – [94] |
| **Falciphora oryzae**            | CBS 125863 T    | EU366999 – KJ026705 – JN857963 – KJ026706 – [95] |
| **Falciporiella solaniterrestris** | CBS 117.83 T  | KM484842 – KM484959 – KM485058 – [91] |
| **Gaeumannomyces caricicola**    | CBS:145041      | MK442584 – MK442583 – MK442582 – MK442581 – MK442580 – [96] |
| **Gaeumannomyces carica**        | CBS:145041      | MK442584 – MK442583 – MK442582 – MK442581 – MK442580 – [96] |
| **Gaeumannomyces carica**        | CBS 388.81 T    | KM484843 – KM484956 – KM484960 – X0306674 – [91] |
| **Gaeumannomyces australiensis** | CPC 26058 T     | KX306480 – KX306550 – KX306683 – KX306619 – [97] |
| **Gaeumannomyces avenae**        | CBS 187.65      | JX134666 – JX134680 – JX134722 – [93] |
| **Gaeumannomyces avenue**        | CBS 870.73 = DAR 20999 | KM484833 – DQ341495 – KM485048 – [91] |
| **Gaeumannomyces californicus**  | CPC 26044 T     | KX306490 – KX306560 – KX306691 – KX306625 – [97] |
| **Gaeumannomyces ellisiorum**    | CBS 387.81 T    | KM484835 – KM484952 – KM485051 – [91] |
| Species | Strains | GenBank Accession Numbers | ITS | LSU | tub2 | tef1-a | rpb1 | SSU | rpb2 | References |
|---------|---------|----------------------------|-----|-----|------|--------|------|-----|------|------------|
| Gaeumannomyces floridanus | CPC 26037<sup>T</sup> | KX306491 KX306561 | – | – | KX306693 KX306626 | – | – | [97] |
| Gaeumannomyces fusiformis | CPC 26068<sup>T</sup> | KX306492 KX306562 | – | – | KX306694 KX306627 | – | – | [97] |
| Gaeumannomyces glyciniolaca | CPC 26266 | KX306494 KX306564 | – | – | KX306696 KX306629 | – | – | [97] |
| Gaeumannomyces glyciniolaca | CPC 26057 | KX306493 KX306563 | – | – | KX306695 KX306628 | – | – | [97] |
| Gaeumannomyces graminicola | CBS 352.93<sup>T</sup> | KM484834 DQ341496 | – | – | KX306697 KM485050 | – | – | [91] |
| Gaeumannomyces graminis | CPC 26045 | KX306505 KX306575 | – | – | KX306708 KX306640 | – | – | [97] |
| Gaeumannomyces graminis var. graminis | M33 | JF710374 JF414896 | – | – | JF710411 JF710442 | – | – | [98] |
| Gaeumannomyces graminis var. graminis | M54 | JF414848 JF414898 | – | – | JF710419 JF710444 | – | – | [98] |
| Gaeumannomyces hylphopodioides | CBS 350.77<sup>T</sup> | KX306506 KX306576 | – | – | KX306709 | – | – | [97] |
| Gaeumannomyces hylphopodioides | CBS 541.86 | KX306507 KX306577 | – | – | KX306717 KX306646 | – | – | [97] |
| Gaeumannomyces oryzicola | CPC 26063<sup>T</sup> | KX306516 KX306586 | – | – | KX306717 KX306646 | – | – | [97] |
| Gaeumannomyces oryzicola | CPC 26030<sup>T</sup> | KX306517 KX306587 | – | – | KX306718 KX306647 | – | – | [97] |
| Gaeumannomyces radicicola | CBS 296.53<sup>T</sup> | KM009170 KM009158 | – | – | KM009206 KM009194 | – | – | [94] |
| Gaeumannomyces setariicola | CPC 26059 | KX306524 KX306594 | – | – | KX306725 KX306654 | – | – | [97] |
| Gaeumannomyces tritici | CBS 273.36 | KX306525 KX306595 | – | – | KX306729 KX306655 | – | – | [97] |
| Gaeumannomyces walkeri | CPC 26028<sup>T</sup> | KX306543 KX306613 | – | – | KX306746 KX306670 | – | – | [97] |
| Gaeumannomyces wongoonoo | BRIP:60376 | JF414848 | – | – | JF710444 | – | – | [98] |
| Kohlmeyeriopsis medullaris | CBS 117849<sup>T</sup> = JK5528S | KM484852 KM484968 | – | – | KM009198 KM485070 | – | – | [91] |
| Macgarvieomyces borealis | CBS 461.65<sup>T</sup> | M1858669 DQ341511 | – | – | KM009198 KM485070 | – | – | [94] |
| Macgarvieomyces juncicola | CBS 610.82 | KM484855 KM484970 | – | – | KM009201 KM485071 | – | – | [91] |
| Magnaporthiopsis agrostidis | BRIP 59300<sup>T</sup> | KT364753 KT364754 | – | – | KT364756 KT364755 | – | – | [100] |
| Magnaporthiopsis cynodontis | RS7-2 = CBS 141700<sup>T</sup> | KJ855508 KM401646 | – | KJ855509 KP282714 | KP268930 | – | – | [101] |
| Magnaporthiopsis cynodontis | RS5-5 | KJ855506 KM401646 | – | KJ855507 KP282712 | KP268928 | – | – | [101] |
| Magnaporthiopsis cynodontis | RS5-3 | KJ855505 KM401645 | – | KJ855508 KP282711 | KP268927 | – | – | [101] |
| Magnaporthiopsis incrustans | M35 | JF414843 JF414892 | – | – | JF710412 JF710437 | – | – | [98] |
| Magnaporthiopsis majdus | M84 | KM009160 KM009148 | – | – | KM009196 KM009184 | – | – | [94] |
| Magnaporthiopsis madis | M85 | KM009161 KM009149 | – | – | KM009197 KM009185 | – | – | [94] |
| Magnaporthiopsis meyeri-festucae | FF2 | MFI718146 MFI718151 | – | – | MFI718167 MFI718162 | – | – | [102] |
| Magnaporthiopsis meyeri-festucae | SCR11 | MFI718150 MFI718155 | – | – | MFI718171 MFI718166 | – | – | [102] |
| Magnaporthiopsis panicorum | CM258<sup>T</sup> | KF689643 KF689633 | – | – | KF689623 KF689613 | – | – | [103] |
| Magnaporthiopsis panicorum | CM1082 | KF689644 KF689634 | – | – | KF689624 KF689614 | – | – | [103] |
| Magnaporthiopsis poae | TAP35 | KJ855511 KM401651 | – | – | KP282717 KP268933 | – | – | [104] |
| Species                          | Strains  | GenBank Accession Numbers |
|---------------------------------|----------|---------------------------|
|                                 |          | ITS  | LSU  | tub2  | tef1-a | rpb1 | SSU  | rpb2 | References |
| Magnaportheopsis poae          | M1       | JF414827 | JF414876 | –     | JF710400 | JF710425 | –     | –     | [98]        |
| Magnaportheopsis poae          | M12      | JF414828 | JF414877 | –     | JF710401 | JF710426 | –     | –     | [98]        |
| Magnaportheopsis rhizophila     | M22      | JF414833 | JF414882 | –     | JF710407 | JF710431 | –     | –     | [98]        |
| Nakataea oryzae                 | M21      | JF414838 | JF414887 | –     | JF710406 | JF710441 | –     | –     | [98]        |
| Nakataea oryzae                 | M69      | JX134672 | JX134685 | –     | JX134698 | JX134726 | –     | –     | [93]        |
| Nakataea oryzae                 | M71      | JX134673 | JX134686 | –     | JX134699 | JX134727 | –     | –     | [93]        |
| Neogaemanannomyces bambusicola  |          |      |      |      |      |      |      |      | [105]       |
| Neopyricularia commelinicola    | CBS 128307 = KACC 44083 | FJ850125 | KM484984 | –     | KM009199 | KM485086 | –     | –     | [91,106]    |
| Neopyricularia commelinicola    | CBS 128308 T | FJ850122 | KM484985 | –     | –     | KM485087 | –     | –     | [91,106]    |
| Neopyricularia dolichostomum    | CBS 114926 = HKUCC 3936 = KM 8 | JX134677 | JX134689 | –     | JX134703 | JX134731 | –     | –     | [93]        |
| Ophioceras leptosporum          | CBS 894.70 T = ATCC 24161 = HME 2955 | JX134678 | JX134690 | –     | JX134704 | JX134732 | –     | –     | [83]        |
| Proxypyricularia zingiberis     | CBS 132355 = MAFF 240221 | AB274433 | KM484987 | –     | –     | KM485090 | –     | –     | [91]        |
| Pseudophialophora eragrostis    | CM12m9   | KF689648 | KF689638 | –     | KF689628 | KF689618 | –     | –     | [103]       |
| Pseudopyricularia cyperi        | CBS 133595 T = MAFF 240229 | KM484872 | KM484990 | –     | –     | AB818013 | –     | –     | [91]        |
| Pseudopyricularia kyllingae     | CBS 133597 T = MAFF 240227 | KM484876 | KM484992 | –     | –     | KT950880 | KM485096 | –     | [91]        |
| Pyricularia ctenantheica        |          | KM484878 | KM484994 | –     | –     | KM485098 | –     | –     | [91]        |
| Pyricularia grisea              | BR0029   | KM484880 | KM484995 | –     | –     | KM485100 | –     | –     | [91]        |
| Pyricularia grisea              | CR0024   | KM484882 | KM484997 | –     | –     | KM485102 | –     | –     | [91]        |
| Pyricularia oryzae              | CBS 365.52 = MUCL 9451 | KM484890 | KM485000 | –     | –     | KM485110 | –     | –     | [76]        |
| Slopeomyces cyindrosorus        | BAN-145  | JF508361 | –     | –     | –     | –     | –     | –     | –          |
| Slopeomyces cyindrosorus        | CG340    | AY428776 | –     | –     | –     | –     | –     | –     | –          |
| Ulreichiana cibissia            | CBS 128780 = CPC 18916 | JF951153 | JF951176 | –     | –     | KM485047 | –     | –     | [76]        |
| Xenopyricularia zizanicola      | CBS 132356 | KM484946 | KM485042 | –     | KM009203 | KM485160 | –     | –     | [91]        |
| Acericola italicula             | MFLUCC 13-0609 T | MF167428 | MF167429 | –     | –     | –     | MF167430 | –     | [109]       |
| Allooneottiosporina thailandica | MFLUCC 15-0576 T | MT177913 | MT177940 | –     | MT45002 | MT177968 | –     | –     | [43]        |
| Allophaeosphaeria muriformia    | MFLUCC 13-0349 T | KP765680 | KP765681 | –     | –     | KP765682 | –     | –     | [105]       |
| Amarenographium amnophilae      | MFLUCC 16-0296 | KU848196 | KU848197 | –     | MG520894 | KU848198 | –     | –     | [109]       |
| Amarenomyces dactylidis         | MFLU 17-0498 T | KY775577 | KY775575 | –     | –     | –     | –     | –     | [110]       |
| Ampelomyces quisquisalis        | CBS 129.79 T | –     | –     | –     | –     | –     | –     | –     | [111]       |
| Banksiophoma australiensis      | CBS 142163 T | KYS97939 | KYS97974 | –     | KYS97689 | –     | –     | –     | [112]       |
| Bhagirinthymicus himalayensis   | AMH 10127 T = NFCCI 4580 | MK836021 | MK836020 | –     | –     | –     | –     | –     | [113]       |
| Species                          | Strains                          | GenBank Accession Numbers  |
|---------------------------------|----------------------------------|---------------------------|
|                                 |                                  | ITS | LSU | tub2 | tef1-a | rpb1 | SSU | rpb2 | References |
| **Bhatiella rosae**             | MFLUCC 17-0664 \(^T\)           | MG828873 | MG828989 | – | – | – | MG829101 | – | [114] |
| **Brunneomurispora lonicerae**  | KUMCC 18-0157 \(^T\)            | MK356373 | MK356346 | – | MK359065 | – | MK356360 | – | [59] |
| **Camarosporioides phragmitis** | MFLUCC 13-0665 \(^T\)           | KX572340 | KX572345 | – | KX572354 | – | KX572350 | – | [115] |
| **Chaetosphaeromona achilleae** | MFLUCC 16-0476 \(^T\)           | KX765265 | KX765266 | – | – | – | – | – | [115] |
| **Chaetosphaeromona hispidulum**| MFLU:16-1965                      | MT177915 | MT177942 | – | – | – | MT177970 | – | [43] |
| **Chaetosphaeromona hispidulum**| MFLU:16-2275                      | MT177914 | MT177941 | – | MT454003 | – | MT177969 | – | [43] |
|                                 | CBS 216.75                         | KF251148 | KF251652 | – | – | – | – | – | [116] |
| **Dactylidina dactylidis**      | MFLUCC 13-0618                    | KP744432 | KP744473 | – | – | – | – | – | [105] |
| **Dactylidina dactylidis**      | MFLUCC 14-0966                    | MG828886 | MG829002 | MG829199 | – | MG829113 | – | MG829116 | – | [114] |
| **Dactylidina dactylidis**      | MFLU:15-2199                      | – | MG829005 | – | – | – | – | – | [114] |
| **Dematiopleospora mariae**     | MFLUCC 13-0612 \(^T\)            | KJ749654 | KJ749653 | – | KJ749655 | – | KJ749652 | – | [117] |
| **Diedrichomyces ficuzae**       | CBS 128019                         | KP170647 | – | – | KP170673 | – | – | – | [118] |
| **Diedrichomyces xanthomendoezea**| CBS 129666                       | KP170651 | – | – | KP170677 | – | – | – | [118] |
| **Diederichomyces ficuzae**     | MFLUCC 14-0976                    | MG828871 | MG828987 | MG829194 | – | MG829099 | – | – | [114] |
| **Equiseticola fusispora**      | MFLUCC 17-2151 \(^T\)            | MT310619 | MT214574 | MT394633 | – | MT226687 | – | – | [119] |
| **Elongaticollum hedychii**     | MFLUCC 18-1638 \(^T\)            | MT321796 | MT321810 | MT328753 | – | MT321803 | – | – | [115] |
| **Embarria clematidis**         | MFLUCC 14-0977                    | MG828871 | MG828987 | MG829194 | – | MG829099 | – | – | [114] |
| **Embarria clematidis**         | MFLUCC 14-0522 \(^T\)            | KU987668 | KU987669 | MG520895 | – | KU987670 | – | – | [122] |
| **Gallicola pseudophaeosphaeria**| MFLUCC 14-0524                    | – | – | – | – | – | – | – | [109] |
| **Hawksworthitha clematidicola**| MFLUCC 14-0910 \(^T\)            | MG828901 | MG829011 | MG829202 | – | MG829120 | – | – | [114] |
| **Hawksworthitha clematidicola**| MFLUCC 14-0955 \(^T\)            | MG828902 | MG829012 | MG829203 | – | MG829121 | – | – | [114] |
| **Hydeomyces desertileptosporoides**| SQUCC 15260 | MK290842 | MK290840 | MK290849 | – | MK290844 | – | – | [123] |
| **Hydeomyces desertileptosporoides**| SQUCC 15259 \(^T\) | MK290841 | MK290839 | MK290848 | – | MK290843 | – | – | [123] |
| **Hydeomyces pinicola**         | GZ-06                             | MK522506 | MK522496 | MK523386 | – | MK522502 | – | – | [124] |
| **Hydeopsis verrucispora**      | SD-2016-5                         | MK522508 | MK522498 | MK523388 | – | MK522504 | – | – | [124] |
| **Italica achilleae**           | MFLUCC 14-0959 \(^T\)            | MG828903 | MG829013 | MG829204 | – | MG829122 | – | – | [114] |
| **Jeremyomyces labinae**        | CBS 144617 \(^T\)                | MK442589 | – | – | MK442695 | – | – | – | [96] |
| **Juncaceicola italica**        | MFLUCC 13-0750                    | KX500110 | KX500107 | MG520897 | – | KX500108 | – | – | [109] |
| **Juncaceicola luzulae**        | MFLUCC 13-0780                    | KX449529 | KX449530 | MG520898 | – | KX449531 | – | – | [125] |
| **Kuanghuaena miscanthi**       | FU31017                           | MK503817 | MK503823 | – | MT009126 | – | MK503829 | – | [126] |
| **Leptosphaeria doliolem**      | CBS 505.75 \(^T\)                | JF740205 | GU301827 | – | GU349069 | – | GU296159 | – | [127,128] |
| Species                         | Strains                        | GenBank Accession Numbers | References |
|---------------------------------|--------------------------------|---------------------------|------------|
|                                 |                                | **ITS** | **LSU** | **tub2** | **tef1-a** | **rpb1** | **SSU** | **rpb2** |          |
| Leptospora galii                | KUMCC 15-0521 ^T               | KX99547 | KX99548 | –        | –        | MG520899 | –        | KX99549 | [109]    |
| Leptospora rubella              | CPC 11006                      | DQ195780 | DQ195792 | –        | –        | –        | –        | DQ195803 | [129]    |
| Leptospora thailandica         | MFLUCC 16-0385 ^T              | KX655559 | KX655549 | –        | KX655564 | –        | KX655554 |          | [130]    |
| Loratospora luzulæ             | MFLUCC 14-0826 ^T              | KT328497 | KT328495 | –        | –        | –        | KT328496 |          | [121]    |
| Magniella scictae              | CBS 239.58                     | MH857770 | MH869303 | –        | –        | –        | –        |          | [76]     |
| Melmikia anthoxanthii           | MFLUCC 14-1010                 | –        | –        | KU848204 | –        | –        | KU848205 |          | [131]    |
| Murichromolaenicola chiangraensis | MFLUCC 17-1488 ^T          | MN994582 | MN994589 | –        | MN998163 | –        | MN994605 |          | [74]     |
| Muriphaesphaeria galatellae     | MFLUCC 15-0769                 | –        | –        | KX383340 | –        | –        | KX38332  |          | [132]    |
| Muriphaesphaeria galatellae     | MFLUCC 14-0611 ^T              | KT438333 | KT438329 | –        | MG520900 | –        | KT438331 |          | [132]    |
| Neophlobolus chromolaenae       | MFLUCC 17-1467 ^T              | MN994583 | MN994562 | –        | MN998164 | –        | MN994606 |          | [74]     |
| Neosetophoma garethjonesii      | MFLUCC 14-0528                 | –        | –        | –        | –        | –        | KY511402 | KY501126 |          |
| Neosetophoma roseaena           | MFLUCC 17-0768 ^T              | MG828928 | MG829037 | –        | –        | –        | MG829143 |          | [114]    |
| Neostagonospora arrenether      | MFLUCC 15-0464                 | KX926417 | KX910091 | –        | MG520901 | –        | KX950402 |          | [134]    |
| Neostagonospora cariceps        | CBS 139092 ^T                  | KFG51163 | KFG51667 | –        | –        | –        | –        |          | [76]     |
| Neostagonospora phragmitis      | MFLUCC 16-0493                 | KX926416 | KX910090 | –        | MG520902 | –        | KX950401 |          | [134]    |
| Neostagonospora sichuanensis    | MFLUCC 18-1223                 | MH394690 | MH394690 | –        | MK313854 | –        | MK296469 |          | [58]     |
| Neostagonospora sichuanensis    | MFLUCC 18-1228 ^T              | MH368073 | MH368079 | –        | MK313851 | –        | MH368088 |          | [58]     |
| Neosulcatispora streitziæ       | CPC 25657                      | KX228253 | KX228305 | –        | –        | –        | –        |          | [112]    |
| Nodulosphaeria guttulatum       | MFLUCC 15-0069                 | –        | –        | –        | –        | –        | KY514394 | KY501115 |          |
| Nodulosphaeria multiseptata     | MFLUCC 15-0078                 | KY496748 | KY496728 | –        | –        | –        | –        | –        | [133]    |
| Nodulosphaeria scabiosa         | MFLUCC 14-1111 ^T             | KU708850 | KU708846 | –        | KU708854 | –        | KU708842 |          | [135]    |
| Ophiobolus italicus             | MFLUCC 17-1791 ^T              | MG520939 | MG520959 | –        | MG520903 | –        | MG520977 |          | [109]    |
| Ophiobolus artenicesis          | MFLUCC 14-1156 ^T              | KT315508 | KT315509 | –        | MG520905 | –        | MG520979 |          | [109]    |
| Ophiobolus disseminans          | MFLUCC 17-1787                 | MG520941 | MG520961 | –        | MG520906 | –        | MG520980 |          | [109]    |
| Ophiobolus ponticus             | MFLUCC 17-2273                 | MG520943 | MG520963 | –        | MG520908 | –        | MG520982 |          | [109]    |
| Ophiobolus tanaceti             | MFLUCC 14-0525                 | KU738890 | KU738891 | –        | MG520910 | –        | KU738892 |          | [109]    |
| Ophiobolus herpotricha          | KY423                          | KP690989 | –        | –        | –        | –        | KP691011 |          | [136]    |
| Ophiobolus korrae               | ATCC 56289                     | KC848509 | –        | –        | –        | –        | KC848515 |          | [136]    |
| Ophiobolus narmari              | ATCC 64688                     | KC848510 | –        | –        | –        | –        | KC848516 |          | [136]    |
| Paraleptosphaeria dryadis       | CBS 643.86                     | JF740213 | GU301828 | –        | GU349009 | –        | KC84632  |          | [127,128]|
| Paraleptospora chromolaenae     | MFLUCC 17-1481 ^T              | MN994587 | MN994563 | –        | MN998167 | –        | MN994609 |          | [74]     |
| Species                        | Strains      | GenBank Accession Numbers                      | References |
|-------------------------------|--------------|-----------------------------------------------|------------|
|                               |              | ITS                            | LSU | tub2 | tef1-a | rpb1 | SSU | rpb2 |                          |
| Paralloneottiosporina sichuanensis | SICAUCC 22-0074 T | ON226746                     | ON227102 | –    | ON244423 | –    | ON227129 | – | This study |
| Paralloneottiosporina sichuanensis | SICAUCC 22-0075 | ON226747                     | ON227103 | –    | ON244424 | –    | ON227130 | – | This study |
| Paraloratospora camporesii    | MFLU 18-0915 T | MN756639                      | MN756637 | –    | –         | –    | MN756635 | – | [113]        |
| Paraphiobolus arundinis       | MFLUCC 17-1789 T | MG520945                      | MG520965 | –    | MG520912 | –    | MG520984 | – | [109]        |
| Paraphiobolus plantaginis     | MFLUCC 17-0245 T | KY797641                      | KY815010 | –    | –         | –    | KY815012 | – | [109]        |
| Paraphoma chrysanthemeicola   | CBS 522.66   | KF251166                      | KF251670 | –    | –         | –    | –         | – | [116]        |
| Paraphoma radicina            | CBS 111.79   | KF251172                      | KF251676 | –    | –         | –    | –         | – | [116]        |
| Parastagonospora italica      | MFLUCC 13-0377 T | KU058714                      | KU058724 | –    | MG520915 | –    | MG520985 | – | [109,137]   |
| Parastagonospora minima       | MFLUCC 13-0376 | KU058713                      | KU058723 | –    | MG520916 | –    | MG520986 | – | [109,137]   |
| Parastagonosporrella fallopiae | CCTU 1151.1 | MH460544                      | MH460546 | –    | –         | –    | MH460550 | – | [138]        |
| Parastagonosporrella fallopiae | CBS 139881 T | MH460543                      | MH460545 | –    | –         | –    | MH460549 | – | [138]        |
| Phaeopaca festucae            | MFLUCC 17-0056 | KY824766                      | KY824767 | –    | –         | –    | KY824769 | – | [134]        |
| Phaeoscripteosa zae           | CBS 144614 T | MK442611                      | MK442547 | –    | –         | –    | MK442702 | – | [96]         |
| Phaeosphaeria chiangrainia    | MFLUCC 13-0231 T | KM434270                      | KM434280 | –    | –         | –    | KM434289 | – | [57]         |
| Phaeosphaeria oryzae          | CBS 110110 T | KF251186                      | KF251689 | –    | –         | –    | GQ87530  | – | [139]        |
| Phaeosphaeria pleurospera     | CBS 460.84   | AF439498                      | –      | –    | –         | –    | –         | – | [140]        |
| Phaeosphaeriopsis glaucoptunctata | MFLUCC 13-0265 | KJ522473                      | KJ522477 | –    | MG520918 | –    | KJ522481 | – | [109,141]   |
| Phaeosphaeriopsis trispeta    | MFLUCC 13-0271 | KJ522475                      | KJ522479 | –    | MG520919 | –    | KJ522484 | – | [109,141]   |
| Phaeosphaeriopsis yuccae      | MFLUCC 16-0558 | KY554482                      | KY554481 | –    | MG520920 | –    | KY554480 | – | [109]        |
| Pimphona vesendalhina         | CBS 145032 T | MK442615                      | MK442551 | –    | MG442706 | –    | –         | – | [96]         |
| Poaceicola arundinis          | MFLUCC 15-0702 T | KU058716                      | KU058726 | –    | MG520921 | –    | MG520988 | – | [109]        |
| Poaceicola italica            | MFLUCC 13-0267 | KX926421                      | KX910094 | –    | MG520924 | –    | KX950409 | – | [109,134]   |
| Populocrescentia ammophilae   | MFLUCC 17-0665 T | MG828949                      | MG829059 | –    | MG829231 | –    | MG829164 | – | [114]        |
| Populocrescentia forlicenesensis | MFLUCC 14-0651 T | KT306948                      | KT306952 | –    | MG520925 | –    | KT306955 | – | [121]        |
| Populocrescentia rosae        | TASM 6125 T  | KX928960                      | –      | MG829060 | –    | MG829232 | –    | MG829165 | – | [114]        |
| Pseudophiobolus mathiei       | MFLUCC 17-1784 | MG520949                      | MG520969 | –    | MG520928 | –    | MG520991 | – | [109]        |
| Pseudophiobolus rosae         | MFLUCC 17-1786 T | MG520952                      | MG520972 | –    | MG520930 | –    | MG520993 | – | [109]        |
| Pseudophiobolus urticola      | KUMCC 17-0168 T | MG520955                      | MG520975 | –    | MG520933 | –    | MG520996 | – | [109]        |
| Pseudophiophlaeba huishuiensis| HS-13        | MK522509                      | MK522499 | –    | –         | –    | MK522505 | – | [124]        |
| Pseudophaeosphaeria rubi      | MFLUCC 14-0259 T | KX765298                      | KX765299 | –    | MG520934 | –    | KX765300 | – | [130]        |
| Sclerostagonospora ericae     | CPC 25927 T  | KX228268                      | KX228319 | –    | –         | –    | –         | – | [112]        |
| Species                        | Strains         | GenBank Accession Numbers                  |
|-------------------------------|-----------------|--------------------------------------------|
|                               |                 | ITS  | LSU  | tub2 | tef1-a | rpb1   | SSU  | rpb2 | References |
| Scolicosporium minkeviciusii  | MFLUCC 12-0089 | –    | KF366382 | –    | –        | –      | KF366383 | –    | [142]      |
| Septoriella phragmitis        | CPC 24118 T    | KR873251 | KR873279 | –    | –        | –      | –    | –    | [143]      |
| Setomelanomma holmii          | CBS 110217     | KT389542 | GU301871 | –    | GU349028 | –      | GU296196 | –    | [127,144] |
| Setophoma terrestris          | CBS 335.29     | KF251246 | KF251749 | –    | KF253196 | –      | –    | –    | [116]      |
| Stagonospora neglecta         | CBS 343.86     | AJ496630 | –    | –    | –        | –      | –    | –    | [145]      |
| Sulcispora supratumida        | MFLUCC 14-0995 T | KP271443 | KP271444 | –    | MH653666 | –      | –    | –    | [146]      |
| Tintelnotia destructans       | CBS 127737 T   | KY090652 | KY090664 | –    | –        | –      | KY090698 | –    | [147]      |
| Tintelnotia opuntiae          | CBS 376.91 T   | KY090651 | GU238123 | –    | –        | –      | GU238226 | –    | [147,148] |
| Vagicola arundinis            | MFLUCC 15-0027 T | KY706139 | KY706129 | –    | MG520936 | –      | KY706134 | –    | [109]      |
| Vittalana mangrovesi          | NFCCI 4251 T   | MG767311 | MG767312 | –    | MG767314 | –      | MG767313 | –    | [149]      |
| Vrystaatta aleoica            | CBS 135107     | KF251278 | KF251781 | –    | –        | –      | –    | –    | [116]      |
| Wingfieldomyces cyperi        | CBS 141450 T   | KX228286 | KX228337 | –    | MK540163 | –      | –    | –    | [150]      |
| Wojnowiciella italica         | MFLUCC 13-0447 T | KX342923 | KX430001 | –    | KX430003 | –      | KX430002 | –    | [130]      |
| Wojnowiciella rosicola        | MFLUCC 15-0128 T | MG828979 | MG829091 | –    | –        | –      | MG829191 | –    | [114]      |
| Wojnowiciella exigula         | CBS 139904 T   | KR476741 | KR476774 | –    | –        | –      | –    | –    | [76]       |
| Xenophoma punctetiae          | CBS 128022     | –    | JQ238619 | –    | KP170686 | –      | –    | –    | [118,151] |
| Xenoseptoria neosaccardoi     | CBS 120.43     | KF251280 | KF251783 | –    | KF253227 | –      | –    | –    | [116]      |
| Xenoseptoria neosaccardoi     | CBS 128665     | KF251281 | KF251784 | –    | KF253228 | –      | –    | –    | [116]      |
| Yunnanensis phragmitis        | MFLUCC 17-1361 T | MF684869 | MF684865 | –    | –        | –      | MF684864 | –    | [152]      |
| Yunnanensis phragmitis        | MFLUCC 17-0315 | MF684862 | MF684863 | –    | –        | –      | MF684862 | –    | [152]      |
| Batrispora marina             | CY 1228        | –    | GQ925848 | –    | GU479848 | –      | GQ925835 | GU479823 | [153]      |
| Batrispora pereviensis        | CCF 4485       | –    | LN626683 | –    | LN626671 | –      | LN626677 | LN626665 | [154]      |
| Neoccultibambusa chiangraiensis | MFLUCC 12-0559 T | –    | KU764699 | –    | –        | –      | KU712458 | –    | [155]      |
| Neoroussoella bambusae         | MFLUCC 11-0124 | –    | KJ474839 | –    | KJ474848 | –      | KJ474856 | –    | [156]      |
| Occultibambusa aquatica       | MFLUCC 11-0006 | –    | KX698110 | –    | –        | –      | KX698112 | –    | [130]      |
| Occultibambusa bambusae       | MFLUCC 11-0394 | –    | KU863113 | –    | KU940194 | –      | KU872117 | KU940171 | [16]       |
| Occultibambusa bambusae       | MFLUCC 13-0855 T | –    | KU863112 | –    | KU940193 | –      | KU872116 | KU940170 | [16]       |
| Occultibambusa chiangraiensis | MFLUCC 16-0380 T | –    | KX655546 | –    | –        | –      | KX655551 | KX655566 | [130]      |
| Occultibambusa fusispora      | MFLUCC 11-0127 T | –    | KU863114 | –    | KU940195 | –      | KU940172 | [16]       |
| Occultibambusa jonesii        | GZCC 16-0117 T | –    | KY628322 | –    | KY814756 | –      | KY628324 | KY814758 | [157]      |
| Occultibambusa kunmingensis   | HKAS 102151 T  | –    | MN913733 | –    | MT954407 | –      | MT864342 | MT878453 | [61]       |
| Occultibambusa maolensis      | GZCC 16-0116  | –    | KY628323 | –    | KY814757 | –      | KY628325 | KY814759 | [157]      |
| Occultibambusa pustula        | MFLUCC 11-0502 | –    | KU863115 | –    | –        | –      | KU872118 | –    | [16]       |
| Paradictyoarthrinium diffraactum | MFLUCC 13-0466 | –    | KP744498 | –    | –        | –      | KP753960 | KX437764 | [105,158] |
| Species                                    | Strains                  | GenBank Accession Numbers                                      |
|-------------------------------------------|--------------------------|----------------------------------------------------------------|
|                                          |                          | ITS                | LSU       | tub2     | tef1-a   | rpb1     | SSU       | rpb2     | References |
| **Paradictyoarthrinium tectonicola**      | MFLUCC 13-0465 T         | –                  | KP744500  | –        | –        | –        | KP753961  | KX437763 | [105,158]  |
| **Roussoella hysterioides**               | HH 26988                 | –                  | AB524622  | –        | AB539115 | –        | AB524481  | AB539102 | [127]      |
| **Roussoella nitidula**                   | MFLUCC 11-0182           | –                  | KJ474843  | –        | KJ474852 | –        | KJ474859  |          | [156]      |
| **Roussoella nitidula**                   | MFLUCC 11-0634           | –                  | KJ474842  | –        | KJ474851 | –        | KJ474858  |          | [156]      |
| **Roussoella pustulans**                  | KT 1709                  | –                  | AB524623  | –        | AB539116 | –        | AB524482  | AB539103 | [1,127]    |
| **Seriascoma bambusae**                   | KUMCC 21-0021            | –                  | MZ329035  | –        | MZ325468 | –        | MZ329031  | MZ325470 | [159]      |
| **Seriascoma didymospora**                | MFLUCC 11-0179 T         | –                  | KU863116  | –        | KU940196 | –        | KU940173  |          | [16]       |
| **Seriascoma didymospora**                | MFLUCC 11-0194           | –                  | KU863117  | –        | KU940197 | –        | KU940174  |          | [16]       |
| **Seriascoma yunnanense**                 | MFLU 19-0690 T           | –                  | NG_068303 | –        | MN381858 | –        | MN174694  | MN210324 | [44]       |
| **Seriascoma yunnanense**                 | SICAUCC 22-0059          | –                  | ON226771  | –        | ON567182 | –        | ON227356  | ON567183 | This study |
| **Torula herbarum**                       | CBS 111855               | –                  | KF443386  | –        | KF443403 | –        | KF443391  | KF443396 | [160]      |
| **Westerdykella ornata**                  | CBS 379.55               | –                  | GU301880  | –        | GU349021 | –        | GU296208  | GU371803 | [127]      |

Notes: superscript T represents ex-type or ex-epitype isolates. “–” means that the sequence is missing, unavailable or unused. New sequences are listed in bold. Abbreviation: AP: Culture Collection of A. Pintos; ATCC: American Type Culture Collection, U.S.A.; BRIP: Queensland Plant Pathology Herbarium, Brisbane, Australia; CBS: Culture Collection of the Westerdijk Fungal Biodiversity Institute, Utrecht, The Netherlands; CFCC: China Forestry Culture Collection Center, Beijing, China; CGMCC: China General Microbiological Culture Collection Center, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China; CPC: Culture Collection of P.W. Crous; DAOM: Plant Research Institute, Department of Agriculture (Mycology), Ottawa, Canada; GZCC: Guizhou Academy of Agricultural Sciences Culture Collection, Guizhou, China; IME: Culture Collection of CABI Europe UK Centre, Egham, UK; JHB: Culture Collection of H.B. Jiang; KUMCC: Kunming Institute of Botany Culture Collection, Yunnan, China; LC: Working collection of Lei Cai, housed at the Institute of Microbiology, Chinese Academy of Sciences, Beijing, China; MFLU: Herbarium of Mae Fah Luang University, Chiang Rai, Thailand; MFLUCC: Mae Fah Luang University Culture Collection, Chiang Rai, Thailand; NCYUCC: National Chiayi University Culture Collection, Chiayi, Taiwan; SICAUCC: Sichuan Agricultural University Culture Collection, Sichuan, China; URM: Culture Collection of the Universidade Federal de Pernambuco, Brazil.
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