FUSE

Fungal Systematics and Evolution

Volume 12
DECEMBER 2023
PAGES 219–246

doi.org/10.3114/fuse.2023.12.11

Molecular phylogeny and morphology reveal two new graminicolous species, *Curvularia aurantia sp. nov.* and *C. vidyodayana sp. nov*. with new records of *Curvularia* spp. from Sri Lanka

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Key words:
dematiaceous hyphomycetes
new taxa
phylogeny
Poaceae

Abstract: Despite being a small island, Sri Lanka is rich in fungal diversity. Most of the fungi from Sri Lanka have been identified as pathogens of vegetables, fruits, and plantation crops to date. The pleosporalean genus *Curvularia* (*Dothideomycetes*) includes phytopathogenic, saprobic, endophytic, and human/animal opportunistic pathogenic fungal species. The majority of the plant-associated *Curvularia* species are known from poaceous hosts. During the current study, 22 geographical locations of the country were explored and collections were made from 10 different poaceous hosts. Morphology and molecular phylogeny based on three loci, including nuclear internal transcribed spacers 1 and 2 with 5.8S nrDNA (ITS), glyceraldehyde-3-phosphate dehydrogenase (*gapdh*), and translation elongation factor 1-α (*tef1*) supported the description of two new species of fungi described herein as *C. aurantia sp. nov*. and *C. vidyodayana sp. nov*. Moreover, novel host-fungal association records for *C. chiangmaiensis*, *C. falsilunata*, *C. lonarensis*, *C. plantarum*, and *C. pseudobrachyspora* are updated herein. In addition, five species within the genus *Curvularia*, *viz*., *C. asiatica*, *C. geniculata*, *C. lunata*, *C. muehlenbeckiae*, and *C. verruculosa* represent new records of fungi from Sri Lanka.

Citation: Ferdinandez HS, Manamgoda DS, Udayanga D, Munasinghe MS, Castlebury LA (2023). Molecular phylogeny and morphology reveal two new graminicolous species, *Curvularia aurantia sp. nov.* and *C. vidyodayana sp. nov*. with new records of *Curvularia* spp. from Sri Lanka. *Fungal Systematics and Evolution* **12**: 219–246. doi: 10.3114/fuse.2023.12.11
Received: 10 June 202; **Accepted:** 28 August 2023; **Effectively published online:** 28 September 2023
Corresponding editor: P.W. Crous

INTRODUCTION

The genus *Curvularia*, typified by *C. lunata*, is a species-rich genus in the family *Pleosporaceae* (*Pleosporales, Dothideomycetes*) (Manamgoda *et al.* 2012b, 2015). It is known that pathogenic species of *Curvularia* can cause plant diseases such as black kernels, grain molds, leaf blights, seedling blights, leaf spots, and opportunistic human infections (Sivanesan 1987, Manamgoda *et al.* 2012b, 2015, Madrid *et al.* 2014). The development of sympodial conidiophores with tretic, terminal, and intercalary conidiogenous cells as well as transversely septate, often curved conidia characterise species of *Curvularia* morphologically. Asymmetrically swollen intermediate cells control the characteristic curvature of conidia; however, species with straight conidia have also been reported (Sivanesan 1987, Marin-Felix *et al.* 2017b). The delimitation of species in *Curvularia* remains ambiguous due to the overlapping morphological characters among closely related taxa. Thus, it is recommended to incorporate molecular data assessments to accurately identify species (Manamgoda *et al.* 2014, 2015, Tan *et al.* 2014, 2018, Marin-Felix *et al.* 2017b, 2020). Members of the genus are associated with a variety of host plants around the world and display varied life modes, including saprophytic, endophytic, and pathogenic lifestyles. Most of the species are known from poaceous hosts (Ellis 1971, Sivanesan 1987, Manamgoda *et al.* 2014, Tan *et al.* 2016).

It is widely accepted that Sri Lanka has a variety of ecosystems and only a small portion of the country's microbial biodiversity has been documented. Only 3 000 species of fungi are currently recognised, despite the estimated 25 000 species of local mycobiota present. There are 404 species of plant pathogenic fungi listed in the most recent checklist on "Plant pathogenic fungi and *Oomycota* in Sri Lanka" by Adikaram & Yakandawala (2020). According to the United States National Fungus Collections database and previous publications, only 14 species of *Curvularia* have been reported so far from Sri Lanka including *Curvularia alcornii, C. eleusinicola*, *C. eragrostidis*, *C. fallax*, *C. hawaiiensis*, *C. lunata*, *C. pallescens*, *C. panici-maximi*, *C. plantarum*, *C. pseudointermedia*, *C. ravenelii*, *C. senegalensis, C. simmonsii*, and *C. tuberculata* (Salim & Mahindapala 1981, Sivanesan 1987, Richardson 1990, Adikaram & Yakandawala 2020, Ferdinandez *et al.* 2021, Farr

& Rossman 2022, Jayawardena *et al.* 2022). Therefore, the objective of this work is to collect *Curvularia* species from poaceous hosts and identify them using morphological and molecular data.

MATERIALS AND METHODS

Sample collection, isolation, and morphological identification

From 2018 to 2021, numerous field surveys were conducted spanning 22 different geographical locations in Anuradhapura, Galle, Gampaha, Hambantota, Kurunegala, Matale, Monaragala, and Puttalam districts in Sri Lanka. Samples with leaf lesions, infected panicles, grains, and associated dead plant materials were collected from various poaceous hosts and brought to the laboratory for further processing. Single spore isolation (Chomnunti *et al.* 2011) was followed to obtain pure cultures of emerging fungi and maintained on potato dextrose agar (PDA, HiMedia-India). The colony characters were determined after inoculating cultures in triplicate on three different media: PDA, corn meal agar (CMA, HiMedia-India), and malt extract agar (MEA, Criterion-USA), at 25 °C, with a 12 h light and 12 h dark light regimen. The Rayner (1970) colour chart was used to record colony colours. Digital images of fungal structures were captured using a Carl Zeiss compound light microscope equipped with an AxioCam digital camera and ZEN lite software (Carl Zeiss Microscopy, Thornwood, NY, USA). The statistical data (mean, standard deviation, minimum, and maximum) for each morphological measurement utilised in the morphological descriptions were recorded. The specimens collected were deposited in USJ-H (University of Sri Jayewardenepura Herbarium) and the living fungal cultures are maintained in USJCC (University of Sri Jayewardenepura Culture Collection). Two taxonomic novelties were registered in MycoBank (www.MycoBank.org; Crous *et al.* 2004).

DNA extraction, PCR, and sequencing

Genomic DNA was extracted from all the isolates following the method described in Ferdinandez *et al.* (2021). The nuclear ribosomal internal transcribed spacers 1 and 2 with 5.8S nrDNA region (ITS) and translation elongation factor 1-α (*tef1*) loci were amplified according to the protocols described in Manamgoda *et al.* (2012b). The glyceraldehyde-3-phosphate dehydrogenase (*gapdh*) locus was amplified using the PCR conditions mentioned in Ferdinandez *et al.* (2021). All the amplificatoin reactions were performed using GoTaq® Green Master Mix (Promega-USA) and PCR products were visualised by agarose gel electrophoresis, in a 2 % gel, with a 100 bp DNA ladder (Promega-USA). The amplified products were purified and sequenced at the Sanger DNA sequencing facility provided by Macrogen (Seoul, Korea).

Sequence alignment, phylogenetic analyses, and species recognition

Raw sequences generated for fresh isolates were assembled with BioEdit v. 7.0.5 for MS Windows (Hall 1999). All the available accepted ex-type and reference DNA sequences for the genus based on numerous publications were included and used in the analyses (Table 1). DNA sequence alignments were performed by MAFFT v. 7 using default settings (http://mafft.cbrc.jp/alignment/server/) (Katoh & Standley 2013). Preliminary identifications of the fresh isolates were determined using newly generated ITS, *gapdh*, and *tef1* sequences using NCBI BLAST. Novel species from the current study were further analysed with their respective closely related taxa from pairwise DNA sequence comparisons using the BLAST tool with default settings (Table 2). Phylogenetic reconstructions were performed using both Maximum parsimony (MP) and Maximum likelihood (ML) criteria as described in Ferdinandez *et al.* (2022). Initially, single-locus trees were generated and compared to visually find out whether the three loci used are congruent with respect to the placement of each species. As no remarkable incongruence was noted, loci were combined in a concatenated alignment. The multi-locus concatenated alignment included 204 strains of *Curvularia* and other members of *Pleosporaceae*, *i.e*., *Alternaria alternata*, *Bipolaris maydis*, *Pyrenophora poae*, *Exserohilum turcicum*, *Johnalcornia aberrans*, and *Porocercospora seminalis* (Marin-Felix *et al.* 2020, Ferdinandez *et al.* 2021). The DNA sequence alignments and phylogenetic trees are available in TreeBASE (study S30416). All DNA sequences were submitted to GenBank (Table 1).

RESULTS

The concatenated three loci sequence alignment comprised 204 *Curvularia* strains and six other pleosporalean taxa as out-groups. Out of the number of 204 *Curvularia* strains in the alignment, 36 in-group strains were fresh isolates collected from the current study. Alignment statistics for the parsimony analysis are as follows: 2 236 total characters, with 1 431 constant characters, 588 parsimony-informative characters, and 217 variable parsimony uninformative characters. Tree statistics for equally most parsimonious tree resulting from the parsimony analysis of the combined dataset with bootstrap 50 % majority rule consensus are as follows: TL = 3 961, CI = 0.327, RI = 0.757, RC = 0.247, HI = 0.673. The resulting phylogram (Fig. 1) from the multi-locus phylogenetic analyses revealed that two lineages from the fresh isolates are distinct from closely related taxa and all other members of the genus, which are described as novel species below (*Curvularia aurantia sp. nov*. and *C. vidyodayana sp. nov*). The remaining 33 isolates obtained were identified as *C. asiatica, C. chiangmaiensis*, *C. falsilunata*, *C. geniculata*, *C. lonarensis*, *C. lunata*, *C. muehlenbeckiae*, *C. plantarum*, *C. pseudobrachyspora*, and *C. verruculosa*.

TAXONOMY

In this section, morphological descriptions, notes on taxonomy, and phylogeny with illustrations are provided for two novel species and 10 other species isolated from Sri Lanka with new host and geographic distribution records.

Curvularia aurantia Ferdinandez, Manamgoda & Udayanga, ***sp. nov.*** MycoBank MB 848300. Fig. 2.

Etymology: Species is named after the latinised term for orange colour "*aurantia*"; colour of the pigment diffused to PDA.

Table 1. GenBank and culture collection accession numbers of *Curvularia* isolates used in this study. Sequences generated in this study are in bold.

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
C. aeria	CBS 294.61^{T}	Air	Brazil	HF934910	HG779148	–	Amaradasa *et al.* (2014), Madrid *et al.* (2014)
C. affinis	CBS 154.34^{T}	Unknown	Indonesia	KJ909780	KM230401	KM196566	Manamgoda *et al.* (2015)
C. ahvazensis	CBS 144673^{T}	*Zinnia elegans*	Iran	KX139029	MG428693	MG428686	Mehrabi-Koushki *et al.* (2018)
C. akaii	CBS 318.86^{T}	Unknown	Japan	LT631340	LT715797	–	Hernandez-Restrepo *et al.* (2018)
C. akaiiensis	BRIP 16080^{T}	Unknown	India	KJ415539	KJ415407	KJ415453	Tan *et al.* (2014)
C. alcornii	MFLUCC 10-0703^{T}	*Zea mays*	Thailand	JX256420	JX276433	JX266589	Manamgoda *et al.* (2012a)
C. americana	UTHSC 08-3414^{T}	Human ankle	USA	HE861833	HF565488	–	da Cunha *et al.* (2013)
C. andropogonis	CBS 186.49^{T}	*Andropogon nardus*	Indonesia	LT631354	LT715835	–	Hernandez-Restrepo *et al.* (2018)
C. angsiewkeeae	BRIP 72449a^{T}	*Scleria sp.*	Australia	OK638993	OK655929	OK655924	–
C. annelliconidiophori	CGMCC 3.19352^{T}	*Saccharum officinarum*	China	MN215641	MN264077	MN263935	Raza *et al.* (2019)
C. arcana	CBS 127224^{T}	Unknown	Unknown	MN688801	MN688828	MN688855	Marin-Felix *et al.* (2020)
C. asiatica	MFLUCC 10-0711^{T}	*Panicum* sp.	Thailand	JX256424	JX276436	JX266593	Manamgoda *et al.* (2012a)
	USJCC–0072	***Oryza sativa***	**Sri Lanka**	**OQ275214**	**OQ269625**	**–**	**This study**
	USJCC–0074	***Oryza sativa***	**Sri Lanka**	**OQ275215**	**OQ269626**	**OQ332408**	**This study**
	USJCC–0075	***Oryza sativa***	**Sri Lanka**	**OQ275216**	**OQ269627**	**–**	**This study**
C. aurantia sp. nov.	**USJCC–0096^{T}**	***Zea mays***	**Sri Lanka**	**OQ275217**	**OQ269628**	**OQ332409**	**This study**
C. australiensis	BRIP 12044^{T}	*Oryza sativa*	Australia	KJ415540	KJ415406	KJ415452	Tan *et al.* (2014)
C. australis	BRIP 12521^{T}	*Sporobolus caroli*	Australia	KJ415541	KJ415405	KJ415451	Tan *et al.* (2014)
C. austriaca	CBS 102694^{T}	Human nasal cavity	Austria	MN688802	MN688829	MN688856	Marin-Felix *et al.* (2020)
C. bannonii	BRIP 16732^{T}	*Jacquemontia tamnifolia*	USA	KJ415542	KJ415404	KJ415450	Tan *et al.* (2014)
C. beasleyi	BRIP 10972^{T}	*Chloris gayana*	Australia	MH414892	MH433638	MH433654	Tan *et al.* (2018)
C. beerburrumensis	BRIP 12942^{T}	*Eragrostis bahiensis*	Australia	MH414895	MH433634	MH433657	Tan *et al.* (2018)
C. boeremae	IMI 164633^{T}	*Portulaca oleracea*	India	MH414911	MH433641	–	Tan *et al.* (2018)
C. borreriae	CBS 859.73^{T}	Volcanic ash soil	Chile	LT631355	LT715838	–	Hernandez-Restrepo *et al.* (2018)
C. bothriochloae	BRIP 12522^{T}	*Bothriochloa bladhii*	Australia	KJ415543	KJ415403	KJ415449	Tan *et al.* (2014)
C. brachyspora	CBS 186.50^{T}	Soil	Java	HG778983	KM061784	KM230405	Madrid *et al.* (2014), Manamgoda *et al.* (2014)
C. buchloes	CBS 246.49^{T}	*Buchloe dactyloides*	USA	KJ909765	KM061789	KM196588	Manamgoda *et al.* (2014)
C. cactivora	CBS 580.74^{R}	Member of *Cactaceae*	Republic of Suriname	MN688803	MN688830	MN688857	Marin-Felix *et al.* (2020)
C. canadensis	CBS 109239^{T}	Overwintered grass	Canada	MN688804	MN688831	MN688858	Marin-Felix *et al.* (2020)
C. caricae-papayae	CBS 135941^{T}	*Carica papaya*	India	LT631350	LT715816	–	Hernandez-Restrepo *et al.* (2018)
C. chiangmaiensis	CPC 28829^{T}	*Zea mays*	Thailand	MF490814	MF490836	MF490857	Marin-Felix *et al.* (2017b)
	USJCC–0022	***Panicum virgatum***	**Sri Lanka**	**MT410574**	**MZ971270**	**MZ971256**	**This study**

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
	USJCC–0064	***Pennisetum pedicellatum***	**Sri Lanka**	**MZ948818**	**MZ971264**	**–**	**This study**
	USJCC–0069	***Cyperus rotundus***	**Sri Lanka**	**OQ275218**	**OQ269629**	**–**	**This study**
	USJCC–0070	***Oryza sativa***	**Sri Lanka**	**OQ275219**	**OQ269630**	**OQ332410**	**This study**
	USJCC–0087	***Panicum virgatum***	**Sri Lanka**	**OQ275220**	**OQ269631**	**–**	**This study**
	USJCC–0144	***Ischaemum* sp.**	**Sri Lanka**	**OQ275221**	**OQ269632**	**–**	**This study**
C. chlamydospora	UTHSC 07-2764^{T}	Human toenail	USA	HG779021	HG779151	–	Madrid *et al.* (2014)
C. chonburiensis	MFLUCC 16-0375^{T}	*Pandanus* sp.	Thailand	MH275055	MH412747	–	Tibpromma *et al.* (2018)
C. chuasooengiae	BRIP 72482a^{T}	*Scleria* sp.	Australia	OK638997	OK655933	–	–
C. clavata	BRIP 61680b	*Oryza rufipogon*	Australia	KU552205	KU552167	KU552159	Khemmuk *et al.* (2016)
C. coatesiae	BRIP 24261^{T}	*Litchi chinensis*	Australia	MH414897	MH433636	MH433659	Tan *et al.* (2018)
C. coicicola	HSAUP 990901	*Coicis lacryma-jobi*	China	AB453880	–	–	Zhang & Zhang (2004)
C. coicis	CBS 192.29^{T}	*Coix lacryma-jobi*	Japan	HF934917	HG779130	JN601006	Amaradasa *et al.* (2014), Madrid *et al.* (2014)
C. coimbatorensis	SZMC 22225^{T}	Human cornea	India	MN628310	MN628306	MN628302	Kiss *et al.* (2020)
C. colbranii	BRIP 13066^{T}	*Crinum zeylanicum*	Australia	MH414898	MH433642	MH433660	Tan *et al.* (2018)
C. comoriensis	CBS 110673	Unknown	Unknown	LT631357	LT715841	–	Hernandez-Restrepo *et al.* (2018)
C. crassiseptata	CBS 503.90^{T}	Plant material	Nigeria	LT631310	LT715882	MN688859	Hernandez-Restrepo *et al.* (2018), Marin-Felix *et al.* (2020)
C. crustacea	BRIP 13524^{T}	*Sporobolus* sp.	Indonesia	KJ415544	KJ415402	KJ415448	Tan *et al.* (2014)
C. curculiginis	YZU 181230^{R}	*Curculigo capitulata*	China	MK507796	MK507794	MK507795	Liu *et al.* (2019)
C. cymbopogonis	CBS 419.78^{T}	*Yucca* sp.	Netherlands	HG778985	HG779129	–	Madrid *et al.* (2014)
C. dactyloctenicola	CPC 28810^{T}	*Dactyloctenium aegyptium*	Thailand	MF490815	MF490837	MF490858	Marin-Felix *et al.* (2017b)
C. dactyloctenii	BRIP 12846^{T}	*Dactylocteniumradulans*	Australia	KJ415545	KJ415401	KJ415447	Tan *et al.* (2014)
C. determinata	CGMCC 3.19340^{T}	*Saccharum officinarum*	China	MN215653	MN264088	MN263947	Raza *et al.* (2019)
C. deightonii	CBS 537.70^{T}	*Sorghum vulgare*	Denmark	LT631356	LT715839	–	Hernandez-Restrepo *et al.* (2018)
C. eleusinicola	USJCC–0005^{T}	*Eleusine coracana*	Sri Lanka	MT262877	MT393583	MT432925	Ferdinandez *et al.* (2021)
C. elliptiformis	CGMCC 3.19351^{T}	*Saccharum officinarum*	China	MN215656	MN264091	MN263950	Raza *et al.* (2019)
C. ellisii	CBS 193.62^{T}	Air	Pakistan	JN192375	JN600963	JN601007	Manamgoda *et al.* (2011)
C. eragrostidicola	BRIP 12538^{T}	*Eragrostis pilosa*	Australia	MH414899	MH433643	MH433661	Tan *et al.* (2018)
C. eragrostidis	CBS 189.48^{T}	*Sorghum*	Java	HG778986	HG779154	–	Madrid *et al.* (2014)
C. falsilunata	CGMCC 3.19329^{T}	*Saccharum officinarum*	China	MN215660	MN264093	MN263954	Raza *et al.* (2019)
	USJCC–0053	***Zea mays***	**Sri Lanka**	**MN044758**	**MN053041**	**MN053010**	**This study**
	USJCC–0067	***Echinochloa crus-galli***	**Sri Lanka**	**MZ948820**	**MZ971266**	**–**	**This study**
	USJCC–0140	***Panicum maximum***	**Sri Lanka**	**OQ275222**	**OQ269633**	**–**	**This study**

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
C. flexuosa	CGMCC 3.19447[T]	*Saccharum officinarum*	China	MN215663	MN264096	MN263957	Raza *et al.* (2019)
C. frankliniae	BRIP 72476a[T]	*Sorghum timorense*	Australia	OK638995	OK655931	OK655926	–
C. fraserae	BRIP 64708a[T]	*Bothriochloa insculpta*	Australia	OM809867	OM721558	OM714552	Tan *et al.* (2022)
C. geniculata	CBS 187.50[T]	*Andropogon sorghum*	Indonesia	KJ909781	KM083609	KM230410	Manamgoda *et al.* (2015)
	USJCC–0021	***Oryza sativa***	**Sri Lanka**	**MT410573**	**MZ971269**	**MZ971255**	**This study**
	USJCC–0037	***Sorghum* sp. (Traditional-Swayanjatha)**	**Sri Lanka**	**MZ948816**	**MZ971262**	**MZ971252**	**This study**
	USJCC–0039	***Zea mays***	**Sri Lanka**	**ON514026**	**ON561896**	**–**	**This study**
	USJCC–0063	***Panicum virgatum***	**Sri Lanka**	**MZ948817**	**MZ971263**	**–**	**This study**
	USJCC–0073	***Saccharum officinarum***	**Sri Lanka**	**ON514024**	**ON561894**	**–**	**This study**
	USJCC–0084	***Ischaemum* sp.**	**Sri Lanka**	**OQ275223**	**OQ269634**	**–**	**This study**
C. gladioli	CBS 210.79	*Gladiolus* sp.	Romania	LT631345	LT715802	–	Hernandez-Restrepo *et al.* (2018)
C. graminicola	BRIP 23186a[T]	*Aristida ingrata*	Australia	JN192376	JN600964	JN601008	Manamgoda *et al.* (2012b)
C. guangxiensis	CGMCC 3.19330[T]	*Saccharum officinarum*	China	MN215667	MN264100	MN263961	Raza *et al.* (2019)
C. gudauskasii	DAOM 165085	Unknown	Unknown	AF071338	AF081393	–	–
C. harveyi	BRIP 57412[T]	*Triticum aestivum*	Australia	KJ415546	KJ415400	KJ415446	Tan *et al.* (2014)
C. hawaiiensis	BRIP 11987[T]	*Oryza sativa*	USA	KJ415547	KJ415399	KJ415445	Tan *et al.* (2014)
C. heteropogonicola	BRIP 14579[T]	*Heteropogon contortus*	India	KJ415548	KJ415398	KJ415444	Tan *et al.* (2014)
C. heteropogonis	CBS 284.91[T]	*Heteropogon contortus*	Australia	KJ415549	JN600969	JN601013	Tan *et al.* (2014)
C. hominis	UTHSC 09-464[T]	Human cornea	USA	HG779011	HG779106	–	Madrid *et al.* (2014)
C. homomorpha	CBS 156.60[T]	Air	USA	JN192380	JN600970	JN601014	Manamgoda *et al.* (2012b)
C. hustoniae	BRIP 72486a[T]	*Heteropogon triticeus*	Australia	OK638999	OK655935	OK655928	–
C. inaequalis	CBS 102.42[T]	Soil	France	KJ922375	KM061787	KM196574	Manamgoda *et al.* (2014)
C. intermedia	CBS 334.64	*Avena versicolor*	USA	HG778991	HG779155	–	Madrid *et al.* (2014)
C. iranica	IRAN 3487C[T]	*Bougainvillea spectabilis*	Iran	MT551122	MN266487	MN266490	Safi *et al.* (2020)
C. ischaemi	CBS 630.82[T]	*Ischaemum indicum*	Solomon Islands	HG778992	HG779131	–	Madrid *et al.* (2014)
C. kenpeggii	BRIP 14530[T]	*Triticum aestivum*	Australia	MH414900	MH433644	MH433662	Tan *et al.* (2018)
C. khuzestanica	CBS 144736[T]	*Atriplex lentiformis*	Iran	MH688044	MH688043	–	Song *et al.* (2019)
C. kusanoi	CBS 137.29[T]	*Eragrostis major*	Japan	JN192381	LT715862	KM196592	Manamgoda *et al.* (2011), Hernandez-Restrepo *et al.* (2018)
C. lamingtonensis	BRIP 12259[T]	*Microlaena stipoides*	Australia	MH414901	MH433645	MH433663	Tan *et al.* (2018)
C. lolii	CMAA 1785[T]	*Lolium multiflorum*	Brazil	MT849336	MT889299	MT881706	Victoria Arellano *et al.* (2021)
C. lonarensis	CBS 140569[T]	Lonar lake	India	KT315408	KY007019	–	Sharma *et al.* (2016)

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
	USJCC–0082	***Saccharum officinarum***	**Sri Lanka**	**OQ275224**	**OQ269635**	**OQ332411**	**This study**
C. lunata	CBS 730.96[T]	Human lung biopsy	USA	JX256429	JX276441	JX266596	Manamgoda *et al*. (2012b)
	USJCC–0023	***Panicum virgatum***	**Sri Lanka**	**MT410575**	**MZ971271**	**MZ971257**	**This study**
	USJCC–0132	***Zea mays***	**Sri Lanka**	**OQ275225**	**OQ269636**	**–**	**This study**
C. lycopersici	Strain 11	*Solanum lycopersicum*	Egypt	KY883347	KY883345	–	Ismail *et al.* (2016)
C. manamgodae	CGMCC 3.19446[T]	*Saccharum officinarum*	China	MN215677	MN264110	MN263971	Raza *et al*. (2019)
C. malina	CBS 131274[T]	*Zoysia matrella*	USA	JF812154	KP153179	KR493095	Tomaso-Peterson *et al*. (2016)
C. mebaldsii	BRIP 12900[T]	*Cynodon transvaalensis*	Australia	MH414902	MH433647	MH433664	Tan *et al.* (2018)
C. micrairae	BRIP 17068a[T]	*Micraira subulifolia*	Australia	OM421618	OM373204	OM373205	–
C. micropus	CBS 127235[T]	*Paspalum notatum*	USA	HE792934	LT715859	–	da Cunha *et al.* (2012), Hernandez-Restrepo *et al*. (2018)
C. microspora	GUCC 6272[T]	*Hippeastrum striatum*	China	MF139088	MF139106	MF139115	Liang *et al.* (2018)
C. millisiae	BRIP 71718a[T]	*Cyperus aromaticus*	Australia	OK661031	OK636415	OK636413	Tan *et al.* (2022)
C. miyakei	CBS 197.29[T]	*Eragrostis pilosa*	Japan	KJ909770	KM083611	KM196568	Manamgoda *et al*. (2014)
C. moringae	CPC 38873[T]	*Moringa ovalifolia*	Namibia	MW175363	MW173105	–	Crous *et al.* (2020)
C. mosaddeghii	IRAN 3131C[T]	*Syzygium cumini*	Iran	MG846737	MH392155	MH392152	Heidari *et al*. (2018)
C. muehlenbeckiae	CBS 144.63[T]	*Muehlenbeckia* sp.	India	HG779002	HG779108	–	Madrid *et al.* (2014)
	USJCC–0027	***Sorghum* sp. (Traditional-Swayanjatha)**	**Sri Lanka**	**MZ948813**	**MZ971259**	**MZ971250**	**This study**
C. nanningensis	GUCC 11005[T]	*Cymbopogon citratus*	China	MH885321	MH980005	MH980011	Zhang *et al*. (2020)
C. neergaardii	BRIP 12919[T]	*Oryza sativa*	Ghana	KJ415550	KJ415397	KJ415443	Tan *et al.* (2014)
C. neoindica	IMI 129790[T]	*Brassica nigra*	India	MH414910	MH433649	MH433667	Tan *et al.* (2018)
C. nicotiae	BRIP 11983[T]	Soil	Algeria	KJ415551	KJ415396	KJ415442	Tan *et al.* (2014)
C. nodosa	CPC 28800[T]	*Digitaria ciliaris*	Thailand	MF490816	MF490838	MF490859	Marin-Felix *et al.* (2017b)
C. nodulosa	CBS 160.58	*Eleusine indica*	USA	JN601033	JN600975	JN601019	Manamgoda *et al.* (2015)
C. oryzae	CBS 169.53[T]	*Oryza sativa*	Vietnam	KP400650	HG779156	KM196590	Madrid *et al*. (2014), Manamgoda *et al.* (2015)
C. oryzae-sativae	CBS 127725[T]	*Oryza sativa*	Argentina	MN688808	MN688835	MN688863	Marin-Felix *et al.* (2020)
C. ovariicola	BRIP 15882	*Eragrostis schultzii*	Australia	JN192384	JN600976	JN601020	Manamgoda *et al.* (2012b)
C. pallescens	CBS 156.35[T]	Air	Indonesia	KJ922380	KM083606	KM196570	Manamgoda *et al*. (2012b)
C. palmicola	MFLUCC 14-0404[T]	*Acoelorrhaphe wrightii*	Thailand	MF621582	–	–	Hyde *et al*. (2017)
C. pandanicola	MFLUCC 15-0746[T]	*Pandanus* sp.	Thailand	MH275056	MH412748	MH412763	Tibpromma *et al.* (2018)
C. panici	Strain OKI-1	*Panicum repens*	Japan	AB164703	–	–	Chung & Tsukiboshi (2005)
C. panici-maximi	USJCC–0006[T]	*Panicum maximum*	Sri Lanka	MN044757	MN053040	MN053009	Ferdinandez *et al*. (2021)
C. papendorfii	CBS 308.67[T]	*Acacia karroo*	South Africa	KJ909774	KM083617	KM196594	Manamgoda *et al.* (2014)

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
C. paraverruculosa	FMR 17656^{T}	Soil	Mexico	LR736641	LR736646	LR736649	Iturrieta-González *et al.* (2020)
C. patereae	CBS 198.87^{T}	*Triticum durum*	Argentina	MN688810	MN688837	MN688864	Marin-Felix *et al.* (2020)
C. penniseti	CBS 528.70	Unknown	Unknown	MH859833	LT715840	–	Hernandez-Restrepo *et al.* (2018), Vu *et al.* (2019)
C. perotidis	CBS 350.90^{T}	*Perotis rara*	Australia	HG778995	HG779138	KM230407	Madrid *et al.* (2014), Manamgoda *et al.* (2014)
C. petersonii	BRIP 14642^{T}	*Dactyloctenium aegyptium*	Australia	MH414905	MH433650	MH433668	Tan *et al.* (2018)
C. phaeospara	CGMCC 3.19448^{T}	*Saccharum officinarum*	China	MN215686	MN264118	MN263980	Raza *et al.* (2019)
C. pisi	CBS 190.48^{T}	*Pisum sativum*	Canada	KY905678	KY905690	KY905697	Marin-Felix *et al.* (2017a)
C. plantarum	CGMCC 3.19342^{T}	*Saccharum officinarum*	China	MN215688	MN264120	MN263982	Raza *et al.* (2019)
	USJCC–0033	***Oryza sativa***	**Sri Lanka**	**OQ275226**	**OQ269637**	**–**	**This study**
	USJCC–0054	***Zea mays***	**Sri Lanka**	**OQ275227**	**OQ269638**	**–**	**This study**
	USJCC–0068	***Echinochloa crus-galli***	**Sri Lanka**	**OQ275228**	**OQ269639**	**–**	**This study**
	USJCC–0078	***Zea mays***	**Sri Lanka**	**OQ275229**	**OQ269640**	**–**	**This study**
	USJCC–0091	***Zea mays***	**Sri Lanka**	**OQ275230**	**OQ269641**	**–**	**This study**
	USJCC–0097	***Zea mays***	**Sri Lanka**	**OQ275231**	**OQ269642**	**–**	**This study**
C. platzii	BRIP 27703b^{T}	*Cenchrus clandestinum*	Australia	MH414906	MH433651	MH433669	Tan *et al.* (2018)
C. polytrata	CGMCC 3.19338^{T}	*Saccharum officinarum*	China	MN215691	MN264123	MN263984	Raza *et al.* (2019)
C. portulacae	BRIP 14541^{T}	*Portulaca oleracea*	USA	KJ415553	KJ415393	KJ415440	Tan *et al.* (2014)
C. prasadii	CBS 143.64^{T}	*Jasminum sambac*	India	KJ922373	KM061785	KM230408	Manamgoda *et al.* (2014)
C. protuberans	CGMCC 3.19360^{T}	*Saccharum officinarum*	China	MN215693	MN264125	MN263986	Raza *et al.* (2019)
C. protuberata	CBS 376.65^{T}	*Deschampsia flexuosa*	Scotland	KJ922376	KM083605	KM196576	Manamgoda *et al.* (2014)
C. pseudobrachyspora	CPC 28808^{T}	*Eleusine indica*	Thailand	MF490819	MF490841	MF490862	Marin-Felix *et al.* (2017b)
	USJCC–0024	***Zea mays***	**Sri Lanka**	**MT410576**	**MZ971272**	**MZ971258**	**This study**
	USJCC–0085	***Panicum virgatum***	**Sri Lanka**	**OQ275232**	**OQ269643**	**OQ332412**	**This study**
C. pseudoclavata	CBS 539.70^{T}	*Oryza sativa*	Denmark	MN688817	MN688844	MN688869	Marin-Felix *et al.* (2020)
C. pseudoellisii	CBS 298.80^{T}	*Sorghum bicolor*	Sudan	MN688818	MN688845	MN688870	Marin-Felix *et al.* (2020)
C. pseudointermedia	CBS 553.89^{T}	Soil	Brazil	MN688819	MN688846	MN688871	Marin-Felix *et al.* (2020)
C. pseudolunata	UTHSC 09-2092^{T}	Human nasal sinus	USA	HE861842	HF565459	–	da Cunha *et al.* (2013)
C. pseudoprotuberata	CBS 385.69^{T}	Soil	Canada	MN688821	MN688848	MN688873	Marin-Felix *et al.* (2020)
C. pseudorobusta	UTHSC 08-3458	Human nasal sinus	USA	HE861838	HF565476	–	da Cunha *et al.* (2013)
C. radici-foliigena	CGMCC 3.19328^{T}	*Saccharum officinarum*	China	MN215695	MN264127	MN263988	Raza *et al.* (2019)
C. radicicola	CGMCC 3.19327^{T}	*Saccharum officinarum*	China	MN215699	MN264131	MN263992	Raza *et al.* (2019)
C. ravenelii	BRIP 13165^{T}	*Sporobolus fertilis*	Australia	JN192386	JN600978	JN601024	Manamgoda *et al.* (2012b)
C. reesii	BRIP 4358^{T}	Air	Australia	MH414907	MH433637	MH433670	Tan *et al.* (2018)

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
C. richardiae	BRIP 4371^{T}	*Richardia brasiliensis*	Australia	KJ415555	KJ415391	KJ415438	Tan *et al.* (2014)
C. robusta	CBS 624.68^{T}	*Dichanthium annulatum*	USA	KJ909783	KM083613	KM196577	Manamgoda *et al.* (2014)
C. rouhanii	CBS 144674^{T}	*Syngonium vellozianum*	Iran	KX139030	MG428694	MG428687	Mehrabi-Koushki *et al.* (2018)
C. ryleyi	BRIP 12554^{T}	*Sporobolus creber*	Australia	KJ415556	KJ415390	KJ415437	Tan *et al*. (2014)
C. saccharicola	CGMCC 3.19344^{T}	*Saccharum officinarum*	China	MN215701	MN264133	MN263994	Raza *et al.* (2019)
C. sacchari-officinarum	CGMCC 3.19331^{T}	*Saccharum officinarum*	China	MN215705	MN264137	MN263998	Raza *et al.* (2019)
C. senegalensis	CBS 149.71	Unknown	Nigeria	HG779001	HG779128	–	Madrid *et al.* (2014)
C. sesuvii	CGMCC 3.9578^{T}	*Sesuvium portulacastrum*	China	EF175940	–	–	Zhang & Li (2009)
C. shahidchamranensis	SCUA-8-Marun^{T}	Soil	Iran	MH550084	MH550083	–	Dehdari *et al*. (2018)
C. sichuanensis	Strain BN9	Air	China	MH483998	–	–	Zhang *et al.* (2007)
C. siddiquii	CBS 196.62^{T}	Air	Pakistan	MN688823	MN688850	–	Marin-Felix *et al*. (2020)
C. simmonsii	USJCC–0002^{T}	*Panicum maximum*	Sri Lanka	MN044753	MN053011	MN053005	Ferdinandez *et al*. (2021)
C. soli	CBS 222.96^{T}	Soil	Papua New Guinea	KY905679	KY905691	KY905698	Marin-Felix *et al*. (2017a)
C. sorghina	BRIP 15900^{T}	*Sorghum bicolor*	Australia	KJ415558	KJ415388	KJ415435	Tan *et al.* (2014)
C. spicifera	CBS 274.52	Soil	Spain	JN192387	JN600979	JN601023	Manamgoda *et al.* (2012b)
C. sporobolicola	BRIP 23040b^{T}	*Sporobolus australasicus*	Australia	MH414908	MH433652	MH433671	Tan *et al*. (2018)
C. stenotaphri	BRIP 71303^{T}	*Stenotaphrum secundatum*	Australia	MZ681952	MZ695824	MZ695819	Crous *et al.* (2021b)
C. subpapendorfii	CBS 656.74^{T}	Soil	Egypt	KJ909777	KM061791	KM196585	Manamgoda *et al.* (2015)
C. suttoniae	FMR 10992^{T}	Human leg wound	USA	HE861828	HF565479	LR736651	Iturrieta-González *et al.* (2020)
C. tamilnaduensis	SZMC 22226^{T}	Human cornea	India	MN628311	MN628307	MN628303	Kiss *et al.* (2020)
C. tanzanica	IMI 507176^{T}	*Cyperus aromaticus*	Tanzania	MW396857	MW388669	–	Crous *et al.* (2021a)
C. templetoniae	BRIP 72453a^{T}	*Hyparrhenia hirta*	Australia	OK442370	OK655930	OK655925	–
C. thailandicum	MFLUCC 15-0747^{T}	*Pandanus* sp.	Thailand	MH275057	MH412749	MH412764	Tibpromma *et al*. (2018)
C. tribuli	CBS 126975^{T}	*Tribulus terrestris*	South Africa	MN688825	MN688852	MN688875	Marin-Felix *et al.* (2020)
C. trifolii	ICMP 6149	*Setaria glauca*	New Zealand	KM230395	KM083607	JX266600	Manamgoda *et al.* (2012b, 2015)
C. tripogonis	BRIP 12375^{T}	*Tripogon loliiformis*	Australia	JN192388	JN600980	JN601025	Manamgoda *et al.* (2011)
C. tropicalis	BRIP 14834^{T}	*Coffea arabica*	India	KJ415559	KJ415387	KJ415434	Tan *et al*. (2014)
C. tsudae	ATCC 44764^{T}	*Chloris gayana*	Japan	KC424596	KC747745	KC503940	Tan *et al*. (2018)
C. tuberculata	CBS 146.63^{T}	*Zea mays*	India	JX256433	JX276445	JX266599	Manamgoda *et al.* (2012b)
C. umbiliciformis	CGMCC 3.19346^{T}	*Saccharum officinarum*	China	MN215711	MN264142	MN264004	Raza *et al.* (2019)
C. uncinata	CBS 221.52^{T}	*Oryza sativa*	Vietnam	HG779024	HG779134	–	Madrid *et al.* (2014)
C. variabilis	CPC 28815^{T}	*Chloris barbata*	Thailand	MF490822	MF490844	MF490865	Marin-Felix *et al*. (2017b)

Table 1. (Continued).

Species	Isolate/Culture Collection[1]	Host/Substratum	Country	GenBank accessions			References
				ITS	*gapdh*	*tef1*	
C. verruciformis	CBS 537.75	*Vanellus miles*	New Zealand	HG779026	HG779133	–	Madrid *et al.* (2014)
C. verrucosa	CBS 422.93	Air	Cuba	MN688826	MN688853	MN688876	Marin-Felix *et al*. (2020)
C. verruculosa	CBS 150.63	*Punica granatum*	India	KP400652	KP645346	KP735695	Manamgoda *et al.* (2015)
	USJCC–0028	***Oryza sativa***	**Sri Lanka**	**MZ948815**	**MZ971261**	**MZ971251**	**This study**
	USJCC–0031	***Zea mays***	**Sri Lanka**	**MZ948814**	**MZ971260**	**–**	**This study**
	USJCC–0103	***Saccharum officinarum***	**Sri Lanka**	**OQ275233**	**OQ269644**	**–**	**This study**
C. vidyodayana sp. nov.	**USJCC–0029^{T}**	***Oryza sativa***	**Sri Lanka**	**OQ275234**	**OQ269645**	**OQ332413**	**This study**
	USJCC–0062	***Oryza sativa***	**Sri Lanka**	**OQ275234**	**OQ269646**	**–**	**This study**
C. vietnamensis	FMR 17659^{T}	Unidentified dead leaves	Vietnam	LR736642	LR736644	LR736647	Iturrieta-González *et al*. (2020)
C. warraberensis	BRIP 14817^{T}	*Dactyloctenium aegyptium*	Australia	MH414909	MH433653	MH433672	Tan *et al*. (2018)
C. xishuangbannaensis	KUMCC 17-0185^{T}	*Pandanus amaryllifollus*	Thailand	MH275058	MH412750	MH412765	Tibpromma *et al*. (2018)
C. yamadana	COAD 375	*Cyperus rotundus*	Brazil	MN954704	–	MT008259	Ferreira & Barreto (2020)
Outgroups							
Alternaria alternata	CBS 916.96^{T}	Unknown	Unknown	KF465761	–	–	Lecellier *et al.* (2014)
Bipolaris maydis	CBS 137271/C5^{T}	*Zea mays*	USA	AF071325	KM034846	KM093794	Berbee *et al.* (1999), Manamgoda *et al.* (2014)
Exserohilum turcicum	CBS 690.71^{T}	*Zea mays*	Germany	LT837487	LT882581	LT896618	Hernandez-Restrepo *et al*. (2018)
Johnalcornia aberrans	CBS 510.91^{T}	*Eragrostis parviflora*	Australia	KJ415522	KJ415424	–	Tan *et al*. (2014)
Porocercospora seminalis	CPC 21305^{T}	*Bouteloua dactyloides*	USA	HF934942	–	–	Amaradasa *et al*. (2014)
Pyrenophora poae	BRIP 10953	Member of *Poaceae*	Australia	KJ415566	KJ415380	KJ415427	Tan *et al*. (2014)

[1]Culture collections: ATCC: American Type Culture Collection, Virginia, USA; BRIP: Queensland Plant Pathology Herbarium, Queensland, Australia; CBS: CBS-KNAW Fungal Biodiversity Centre, Utrecht, The Netherlands; CGMCC: China General Microbiological Culture Collection, Institute of Microbiology, Chinese Academy of Sciences, Beijing, China; CMAA: Collection of Microorganisms of Agricultural and Environmental Importance at Embrapa Environmental research unit (Embrapa Meio-Ambiente), Brazil; COAD: Universidade Federal de Viçosa - Coleção Octávio de Almeida Drumond; CPC: working collection of P.W. Crous, housed at the Westerdijk Fungal Biodiversity Institute, Utrecht, the Netherlands; DAOM: Plant Research Institute, Department of Agriculture (Mycology), Ottawa, Canada; FMR: Medical School of the Rovira i Virgili University, Reus, Spain; GUCC: Department of Plant Pathology, Agriculture College, Guizhou University, P.R. China; HSAUP: Herbarium of Shandong Agricultural University, Department of Plant Pathology, China; ICMP: International Collection of Micro-organisms from Plants, Landcare Research, Auckland, New Zealand; IMI: International Mycological Institute, Kew, UK; IRAN: Iranian Fungal Culture Collection, Iranian Research Institute of Plant Protection, Iran; KUMCC: Kunming Institute of Botany Culture Collection; MFLUCC: Mae Fah Luang University culture collection, Thailand; SCUA: the Collection of Fungal Cultures, Department of Plant Protection, Shahid Chamran University of Ahvaz, Iran; SZMC: Szeged Microbiology Collection, Hungary; YZU: Culture Collection of Yangtze University Jingzhou, China; USJCC: University of Sri Jayewardenepura Culture Collection, Sri Lanka; UTHSC: Fungus Testing Laboratory, University of Texas Health Science Center, San Antonio, Texas. ^{R} and ^{T} indicate reference and ex-type strains, respectively.

Table 2. Pairwise comparison of the loci analysed for novel species described in the current study with closely related taxa.

Novel species	Closely related taxa	Locus, Identity and Gaps (both with percentages)					
		ITS		*gapdh*		*tef1*	
		Identity and percentage	Gaps	Identity and percentage	Gaps	Identity and percentage	Gaps
Curvularia aurantia sp. nov. (USJCC–0096)	*C. coicis*	551/565 (98 %)	6/565 (1 %)	360/373 (97 %)	0/373 (0 %)	910/914 (99 %)	0/914 (0 %)
	C. ischaemi	452/487 (93 %)	16/487 (3 %)	497/502 (99 %)	0/502 (0 %)	–	–
	C. crassiseptata	455/485 (94 %)	15/485 (3 %)	336/345 (97 %)	1/345 (0 %)	868/891 (97 %)	0/891 (0 %)
	C. comoriensis	453/486 (93 %)	16/486 (3 %)	517/542 (95 %)	6/542 (1 %)	–	–
	C. heteropogonicola	385/405 (95 %)	10/405 (2 %)	355/370 (96 %)	1/370 (0 %)	781/804 (97 %)	0/804 (0 %)
	C. cymbopogonis	454/485 (94 %)	15/485 (3 %)	325/337 (96 %)	1/337 (0 %)	–	–
Curvularia vidyodayana sp. nov. (USJCC–0029)	*C. affinis*	506/509 (99 %)	1/509 (0 %)	542/551 (98 %)	0/551 (0 %)	898/899 (99 %)	0/899 (0 %)
	C. soli	499/509 (98 %)	5/509 (0 %)	579/587 (99 %)	0/587 (0 %)	918/921 (99 %)	0/921 (0 %)
	C. thailandicum	496/507 (98 %)	6/507 (1 %)	335/347 (97 %)	0/347 (0 %)	901/909 (99 %)	1/909 (0 %)
	C. xishuangbannaensis	493/504 (98 %)	5/504 (0 %)	528/537 (98 %)	1/537 (0 %)	876/883 (99 %)	2/883 (0 %)
	C. millisiae	504/514 (98 %)	5/514 (0 %)	564/576 (98 %)	0/576 (0 %)	972/978 (99 %)	1/978 (0 %)
	C. asiatica	460/467 (99 %)	5/467 (1 %)	483/487 (99 %)	0/487 (0 %)	913/916 (99 %)	0/916 (0 %)
	C. senegalensis	504/514 (98 %)	5/514 (0 %)	536/545 (98 %)	0/545 (0 %)	–	–
	C. geniculata	504/514 (98 %)	5/514 (0 %)	443/448 (99 %)	0/448 (0 %)	821/822 (99 %)	0/822 (0 %)

On leaf lesions (2–5 cm long) of *Zea mays*. *Asexual morph*: On CMA *hyphae* 4–5 µm wide, subhyaline to pale brown, septate, branched. *Stroma* 3–8 mm long, dark brown to black, elongated, branched, dense hypha. *Conidiophores* (115–)161–500(–611) × 5–8(–9) µm (x̄ = 330 × 6 µm, *n* = 20), hyaline to pale brown, micronematous to macronematous, septate, simple or branched, straight or flexuous, sometimes geniculate at the apex. *Conidiogenous cells* (4–)5–10(–15) × 4–6(–7) µm (x̄ = 8 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to slightly swollen, terminal or intercalary, mono- to polytretic. *Conidia* (18–)23–26(–30) × (10–)11–13(–16) µm (x̄ = 24 × 12 µm, *n* = 30), hyaline to pale brown, curved, asymmetrical, sometimes Y-shaped, enlarged middle cells, 3–4-distoseptate; *hila* inconspicuous. *Microconidiation* observed. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 36 mm diam after 7 d at 25 °C, colonies from above: irregular, margin irregular, slightly raised, velvety appearance, dark brown at the margin, mouse grey aerial mycelia, producing orange colour pigment which defuse to the media; dark brown to black elongated, branched stroma observed above the media after about 5 d, reverse: dark brown at the margin, black in the centre. Colonies on CMA reaching 40 mm diam after 7 d at 25 °C, colonies from above: circular, margin irregular, flat, hairy appearance, white at the margin, grey in the centre, concentric ring growth; reverse: pale brown centre to margin. Colonies on MEA reaching 50 mm diam after 7 d at 25 °C, colonies from above: circular, margin mostly irregular, flat, hairy appearance, dark green and dark grey concentric ring growth, mouse grey in the centre; reverse: brown at the margin, black in the centre.

Typus: **Sri Lanka**, Central Province, Matale District, Dambulla, N 7.903257 E 80.670494, on leaf spots of *Zea mays*, 15 Aug. 2019, *H.S. Ferdinandez* (**holotype** USJ-H-087, culture ex-type USJCC–0096).

Known host and distribution: *Zea mays* in Sri Lanka (this study).

Notes: Based on the phylogenetic analyses and pairwise DNA sequence comparison results (Table 2), *C. aurantia* (USJCC–0096) is closely related to *C. coicis* and *C. ischaemi*. Pairwise DNA sequence comparison revealed that *C. aurantia* is distinct from its closely related taxa. *Curvularia aurantia* differs by having smaller conidia compared to those of *C. ischaemi* (22.5–)24–35(–40) × (11.5–)13–17.5(–18.5) µm and of *C. coicis* 40–64 × 17–23 µm (Sivanesan 1987). Conidia of *C. ischaemi* are 3-distoseptate while in *C. coicis* they are 4–5-distoseptate. Moreover, when compared to *C. aurantia* both taxa have shorter conidiophores; *C. ischaemi* up to 375 µm long and *C. coicis* up to 200 µm long. *Curvularia coicis* has been reported from several *Coix* spp. and *Zea mays* (Farr & Rossman 2022). *Curvularia ischaemi* has only been reported from *Ischaemum* spp. (Farr & Rossman 2022). *Curvularia aurantia* was collected from *Zea mays* during this study. Therefore, based on molecular data and morphology, *C. aurantia* is described herein as a new species.

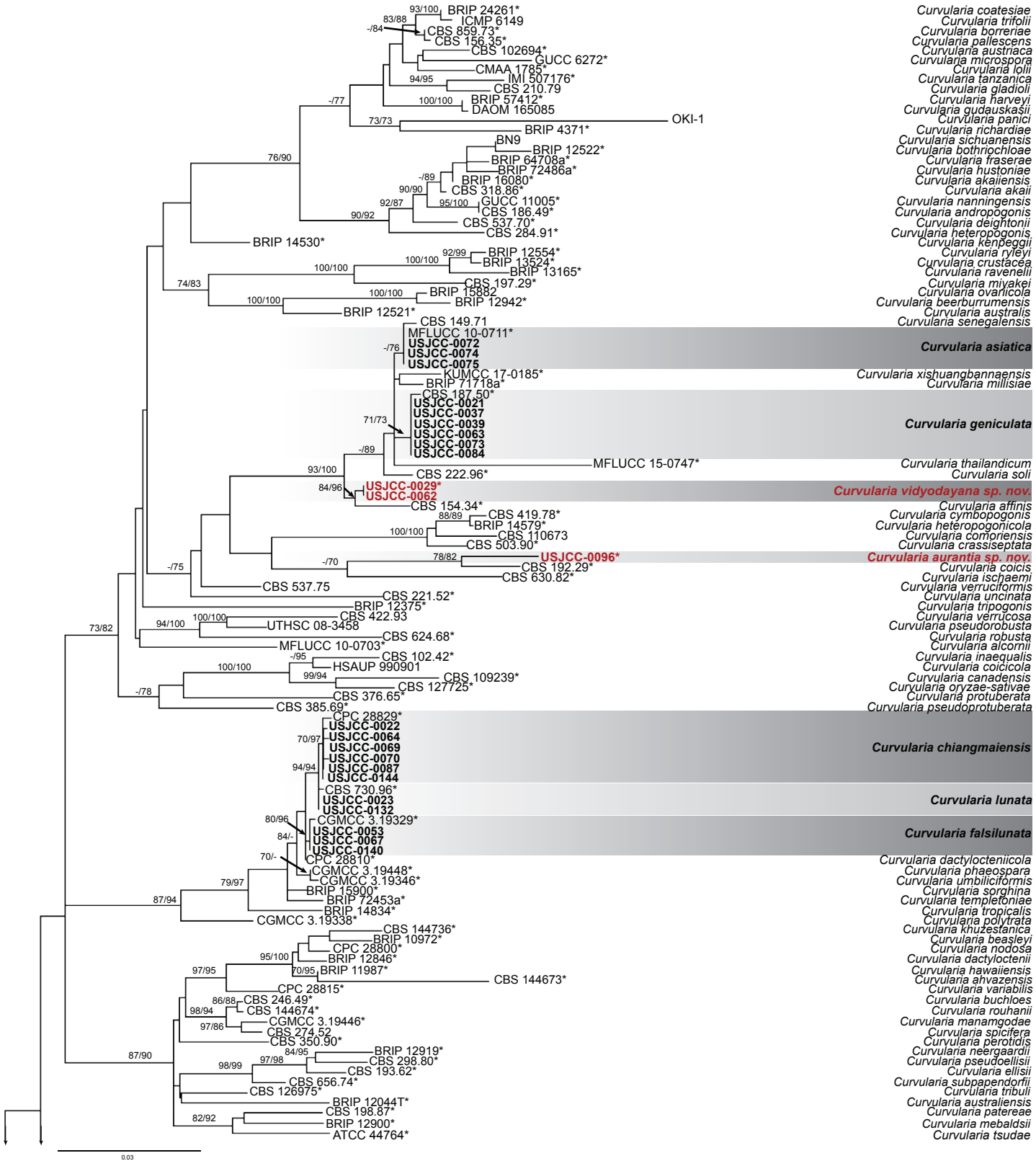

Fig. 1. Phylogram of *Curvularia* spp. based on the combined ITS, *gapdh*, and *tef1* alignment. Maximum parsimony and RAxML bootstrap support values above 70 % are shown at the nodes respectively. Type cultures are marked with an asterisk. Novel species from the current study are indicated in red. New records are in bold. The tree is rooted with other members of *Pleosporaceae* (*Alternaria alternata*, *Bipolaris maydis*, *Pyrenophora poae*, *Exserohilum turcicum*, *Johnalcornia aberrans,* and *Porocercospora seminalis*); the root branches were shortened to facilitate layout by the factor indicated on them.

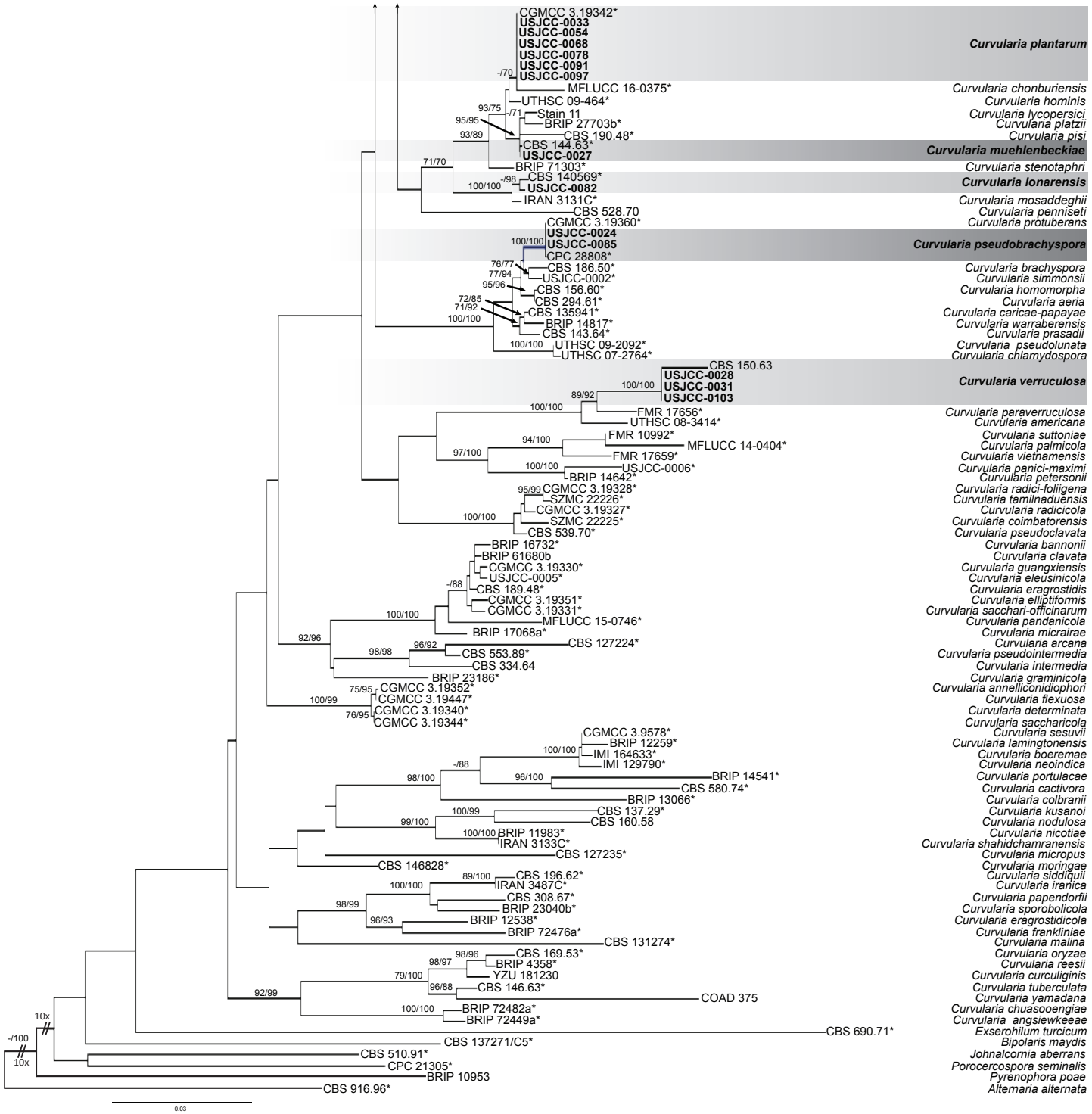

Fig. 1. (Continued).

Curvularia vidyodayana Ferdinandez, Manamgoda & Udayanga, ***sp. nov.*** MycoBank MB 848301. Fig. 3.

Etymology: Name refers to the Vidyodaya, former name of the University of Sri Jayewardenepura where this research study was carried out.

Saprobic on grains of *Oryza sativa*. *Asexual morph*: On CMA *hyphae* 4–6 µm wide, hyaline, septate, branched. *Conidiophores* 51–232(–432) × (4–)5–6 µm ($\bar{x}$ = 142 × 5 µm, *n* = 20), hyaline to brown, micronematous to macronematous, septate, simple or branched, straight or flexuous, swollen at the apex. *Conidiogenous cells* (9–)10–16(–20) × (4–)5–6 µm ($\bar{x}$ = 13 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to swollen, terminal or intercalary, mono- to polytretic. *Conidia* (16–)19–25(–27) × (7–)8–10(–11) µm ($\bar{x}$ = 22 × 9 µm, *n* = 30), hyaline immature conidia, pale brown to brown mature conidia, slightly curved, mostly ellipsoidal with broadly tapering ends, mostly enlarged third cell from the base, usually 3-, occasionally 4-distoseptate; *hila* 2–3 µm wide, slightly protruding, darkened. *Chlamydospores* 10–12 µm diam, dark brown, globose to subglobose or cylindrical, grouped as chain, thick-walled, terminally and intercalary. *Sexual morph* not observed.

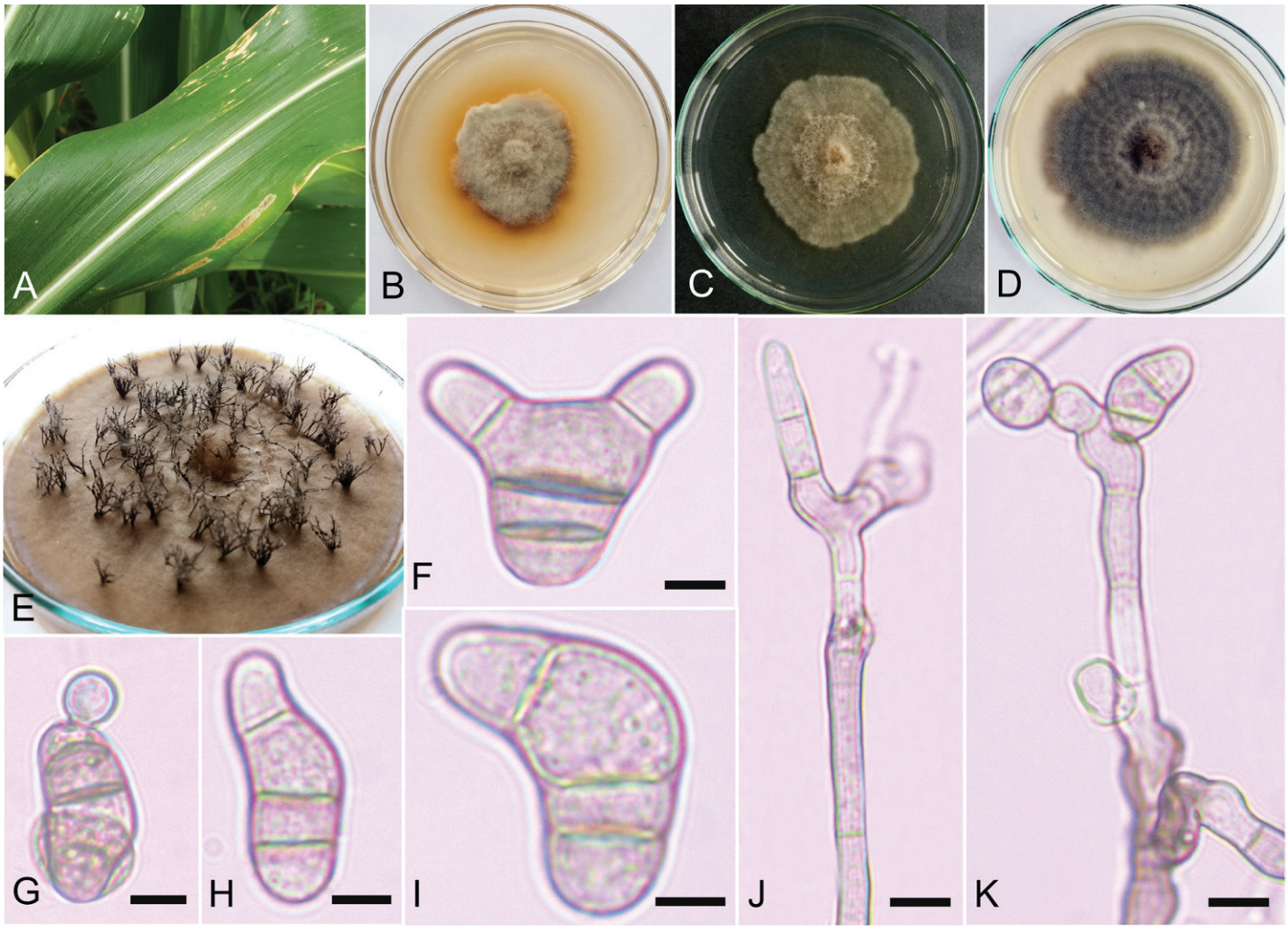

Fig. 2. *Curvularia aurantia* (USJCC–0096, ex-type). **A.** Host: lesions on leaf blade of *Zea mays*. **B–D.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **E.** Stroma on 14-d-old colony on PDA. **F–I.** Conidia. **J.** Conidiophore. **K.** Conidiophore with immature conidia. Scale bars: F–I = 6 µm; J, K = 9 µm.

Culture characteristics: Colonies on PDA reaching 41 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, slightly raised, cottony appearance, pale brown at the margin, mouse grey in the centre, reverse: brown at the margin, black in the centre. Colonies on CMA reaching 68 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, pale brown and grey concentric ring growth; reverse: pale brown centre to margin. Colonies on MEA reaching 73 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, convex, cottony appearance, dark brown at the margin, white to dark green centre to periphery; reverse: brown at the margin, black in the centre.

Typus: **Sri Lanka**, Southern Province, Galle District, Yakkalamulla, N 6.078573 E 80.373524, on grains of *Oryza sativa*, 25 Aug. 2018, *H.S. Ferdinandez* (**holotype** USJ-H-009, culture ex-type USJCC–0029); *ibid.* (**isotype** USJ-H-010, culture USJCC–0062).

Known host and distribution: *Oryza sativa* in Sri Lanka (this study).

Notes: Based on the phylogenetic analyses and pairwise DNA sequence comparison results (Table 2), *C. vidyodayana* is closely related to *C. affinis*. The pairwise DNA sequence comparison revealed that *C. vidyodayana* is distinct from its closely related taxa. In the comparison of morphological characters with *C. affinis*, *C. vidyodayana* has smaller (19–25 µm), 3–4-distoseptate conidia while *C. affinis* has 27–49 × 8–13 µm, 4–5-distoseptate conidia. *Curvularia affinis* is a cosmopolitan fungus and has been recorded in Asian countries from several poaceous hosts including *Oryza sativa* (India, Malaysia, and Taiwan), *Pennisetum typhoides* (India), *Sorghum vulgare* (Taiwan) and *Zea mays* (Malaysia) (Farr & Rossman 2022). *Curvularia vidyodayana* was recorded on dried grains of *Oryza sativa*. Because of the disparities among *C. affinis* and *C. vidyodayana*, both in morphological and molecular data, we propose *C. vidyodayana* as a new species.

Curvularia asiatica Manamgoda *et al.* [as '*asianensis*'], *Sydowia* **64**: 262. 2012. MycoBank MB 545037. Fig. 4.

Saprobic on dried grains *Oryza sativa*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (99–)131–368(–495) × (4–)6–9(–12) µm ($\bar{x}$ = 249 × 8 µm, *n* = 20), pale brown to dark brown, micronematous to macronematous, septate, simple or branched, straight or flexuous, swollen at the apex. *Conidiogenous cells* (5–)6–8(–9) × (3–)4–6(–7) µm ($\bar{x}$ = 7 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled,

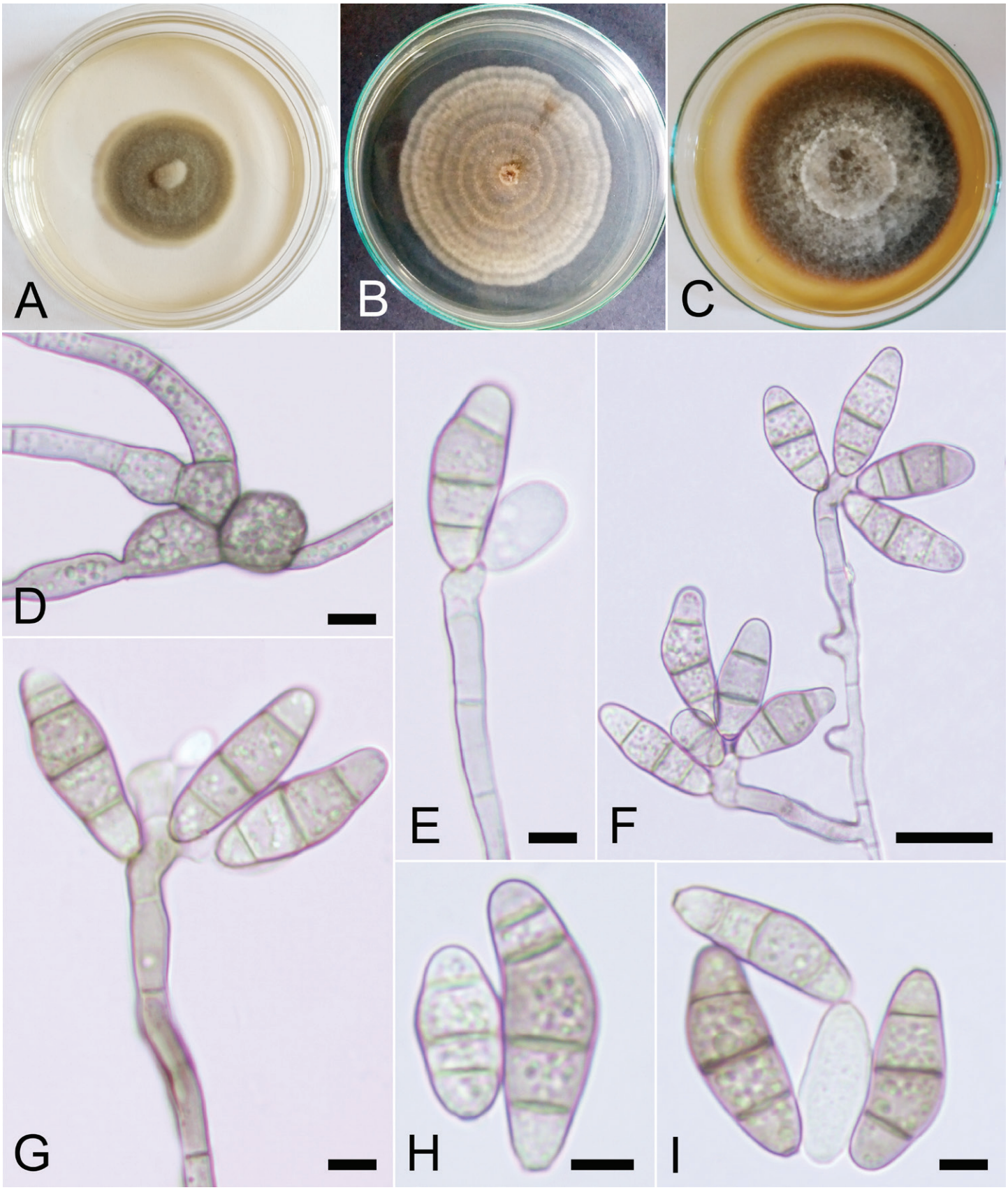

Fig. 3. *Curvularia vidyodayana* (USJCC–0029, ex-type). **A–C**. Seven-day-old colony on PDA, CMA, and MEA, respectively. **D.** Chlamydospores. **E–G.** Conidia attached to conidiophores. **H, I.** Conidia. Scale bars: D, E, G–I = 5 µm; F = 15 µm.

swollen, terminal or intercalary, mono- to polytretic. *Conidia* (16–)20–26(–34) × (7–)9–11(–14) µm ($\bar{x}$ = 23 × 10 µm, *n* = 30), hyaline to pale brown apical and basal cells, pale brown to dark brown matured conidia, straight or curved, asymmetrical, sometimes clavate, enlarged middle cells, dark brown septa, 3–4-distoseptate; *hila* 1–2 µm wide, protruding, darkened. *Sexual morph* not observed.

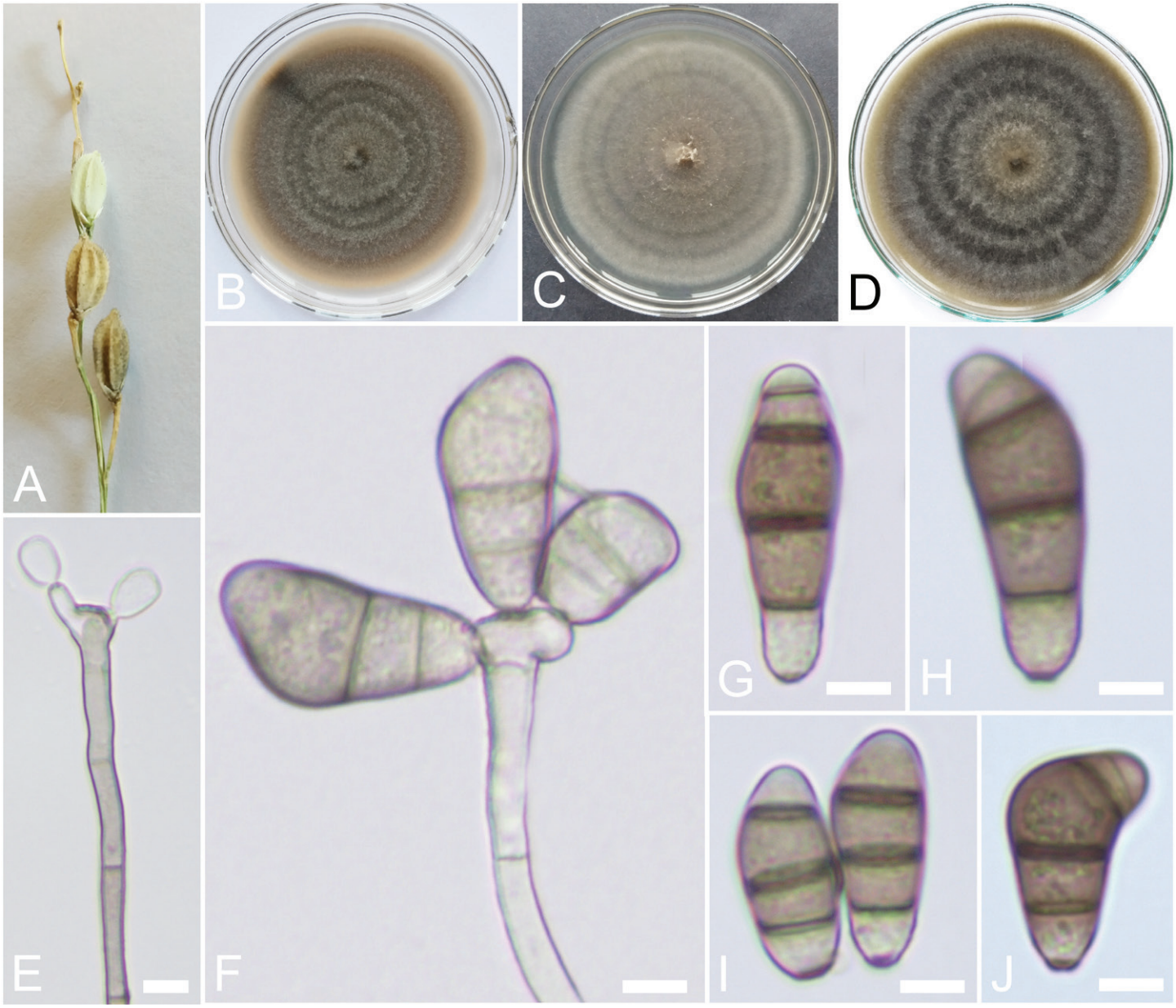

Fig. 4. *Curvularia asiatica* (USJCC–0075). **A.** Host: black spore masses on dried grains of *Oryza sativa*. **B–D.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **E.** Immature conidia on conidiophore. **F.** Conidia attached to conidiophore. **G–J.** Conidia. Scale bars: E–H = 5 µm; I, J = 6 µm.

Culture characteristics: Colonies on PDA reaching 84 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, slightly convex, cottony appearance, dark brown at the margin, grey aerial mycelia, concentric ring growth; reverse: dark brown at the margin, black in the centre. Colonies on CMA reaching 90 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, pale brown in the centre, concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 86 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, convex, cottony appearance, dark brown and brown concentric ring growth, mouse grey in the centre; reverse: dark brown at the margin, black in the centre.

Materials examined: **Sri Lanka**, North Western Province, Kurunegala District, Pilessa, N 7.464732 E 80.401004, on dried grains of *Oryza sativa*, 19 Feb. 2019, *H.S. Ferdinandez*, USJ-H-057, living culture USJCC–0075; *ibid.*, USJ-H-052, living culture, USJCC–0074; *ibid.*, USJ-H-045, living culture USJCC–0072.

Known hosts and distribution: Oryza sativa in Australia (Khemmuk *et al.* 2016); *Epipremnum pinnatum* (Wang *et al*. 2018) and *Saccharum officinarum* (Raza *et al.* 2019) in China; *Sansevieria trifasciata* in Malaysia (Kee *et al*. 2020); *Panicum* spp., *Saccharum officinarum,* and *Oryza sativa* in Thailand (Manamgoda *et al*. 2012a); *Festuca* sp., *Microstegium* sp., and *Paspalum* sp. in USA (Manamgoda *et al*. 2015); *Oryza sativa* in Sri Lanka (this study).

Notes: Isolates USJCC–0072, USJCC–0074, and USJCC–0075 were identified as *C. asiatica*. Fresh isolates were collected from dried grains of *Oryza sativa*. *Curvularia asiatica* has so far been recorded in Australia, China, Malaysia, Thailand, and USA (Farr & Rossman 2022). To our knowledge, this is the first record of *C. asiatica* from Sri Lanka.

Curvularia chiangmaiensis Y. Marín *et al*., *Mycosphere* **8**: 1565. 2017. MycoBank MB 822082. Fig. 5.

Fig. 5. *Curvularia chiangmaiensis* (USJCC–0064). **A.** Host: lesions on leaf of *Pennisetum pedicellatum*. **B–D.** Seen-day-old colony on PDA, CMA, and MEA, respectively. **E.** Conidiophore. **F, G.** Conidia attached to conidiophores. **H–J.** Conidia. Scale bars: E = 6 µm, F, G = 8 µm, H–J = 3 µm.

On leaf lesions of *Pennisetum pedicellatum*. *Asexual morph*: On CMA *hyphae* 4–5 µm wide, hyaline, septate, branched. *Conidiophores* (65–)91–262(–427) × (3–)4–6(–8) µm ($\bar{x}$ = 177 × 5 µm, *n* = 20), pale brown to dark brown, mostly subhyaline at the apex, micronematous to macronematous, septate, simple or branched, straight or flexuous with subnodulose and nodulose intercalary swellings, geniculate at the apex. *Conidiogenous cells* (6–)7–11(–13) × 4–5(–6) µm ($\bar{x}$ = 9 × 5 µm, *n* = 20), subhyaline, rarely brown, smooth-walled, subcylindrical to slightly swollen, terminal, mono- to polytretic. *Conidia* (20–)21–24(–25) × (7–)8–10(–11) µm ($\bar{x}$ = 22 × 9 µm, *n* = 30), hyaline to pale brown, mostly ellipsoidal, straight, sometimes curved, mostly enlarged third cell from base, 3-distoseptate; *hila* 1–2 µm wide, flat, darkened. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 51 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, convex, cottony appearance, white at the margin, grey aerial mycelia; reverse: brown at the margin, black in the centre. Colonies on CMA reaching 73 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, pale brown concentric ring growth; reverse: pale brown at the margin, brown in the centre. Colonies on MEA reaching 70 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, convex, cottony appearance, dark green and grey concentric ring growth, mouse grey in the centre; reverse: dark brown at the margin, black in the centre.

Materials examined: **Sri Lanka**, North Western Province, Kurunegala District, Dambadeniya, N 7.378799 E 80.161981, on leaves of *Pennisetum pedicellatum*, 24 Oct. 2018, *H.S. Ferdinandez*, USJ-H-018, living culture USJCC–0064; Western Province, Gampaha District, Minuwangoda, N 7.170841 E 79.942587, on leaves of *Panicum virgatum,* 24 Oct. 2018, *H.S. Ferdinandez*, USJ-H-017, living culture USJCC–0022; Western Province, Gampaha District, Minuwangoda, N 7.170841 E 79.942587, on leaves of *Cyperus rotundus*, 24 Oct. 2018, *H.S. Ferdinandez*, USJ-H-037, living culture USJCC–0069; Western Province, Gampaha District, Ja-Ela, N 7.079222 E 79.906035, on leaves of *Oryza sativa*, 31 Jan. 2019, *H.S. Ferdinandez*, USJ-H-040, living culture USJCC–0070; North Central Province, Anuradhapura District, Thuruwila, N 8.247372 E 80.419233, on dried leaves of *Panicum virgatum,* 13 Jun. 2019, *D.S. Manamgoda*, USJ-H-074, living culture USJCC–0087; Uva Province, Monaragala District, Wellawaya, N 6.729670 E 81.104552, on leaves of *Ischaemum* sp., 21 Dec. 2021, *H.S. Ferdinandez*, USJ-H-116, living culture USJCC–0144.

Known hosts and distribution: *Saccharum officinarum* in China (Raza *et al.* 2019); *Zea mays* in Thailand (Marin-Felix *et al.* 2017b); *Cyperus rotundus, Ischaemum* sp., *Oryza sativa, Panicum virgatum,* and *Pennisetum pedicellatum* in Sri Lanka (this study).

Notes: Isolates USJCC–0022, USJCC–0064, USJCC–0069, USJCC–0070, USJCC–0087, and USJCC–0144 were identified as *C. chiangmaiensis*. So far, *C. chiangmaiensis* has only been recorded from *Saccharum officinarum* (Raza *et al.* 2019) and *Zea mays* (Marin-Felix *et al.* 2017b). All six fresh isolates collected from *Cyperus rotundus, Ischaemum* sp., *Oryza sativa, Panicum virgatum*, and *Pennisetum pedicellatum* in Sri Lanka update the novel host-fungal association records herein. To our knowledge, this is the first record of *C. chiangmaiensis* from Sri Lanka.

Curvularia falsilunata M. Raza *et al*., *Fungal Diversity* **99**: 54. 2019. MycoBank MB 556659. Fig. 6.

Leaf blight on *Zea mays*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (71–)87–244(–318) × 4–7(–9) µm ($\bar{x}$ = 166 × 5 µm, *n* = 20), hyaline to pale brown, micronematous to macronematous, septate, simple or branched, mostly straight, sometimes flexuous. *Conidiogenous cells* (7–)8–13(–16) × 4–5(–6) µm ($\bar{x}$ = 11 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical, terminal or intercalary, mono- to polytretic. *Conidia* (18–)21–24(–26) × (5–)7–9(–10) µm ($\bar{x}$ = 23 × 8 µm, *n* = 30), hyaline to pale brown, ellipsoidal, slightly curved, 3-distoseptate; *hila* inconspicuous. *Chlamydospores* 11–16 µm diam, pale brown to dark brown,

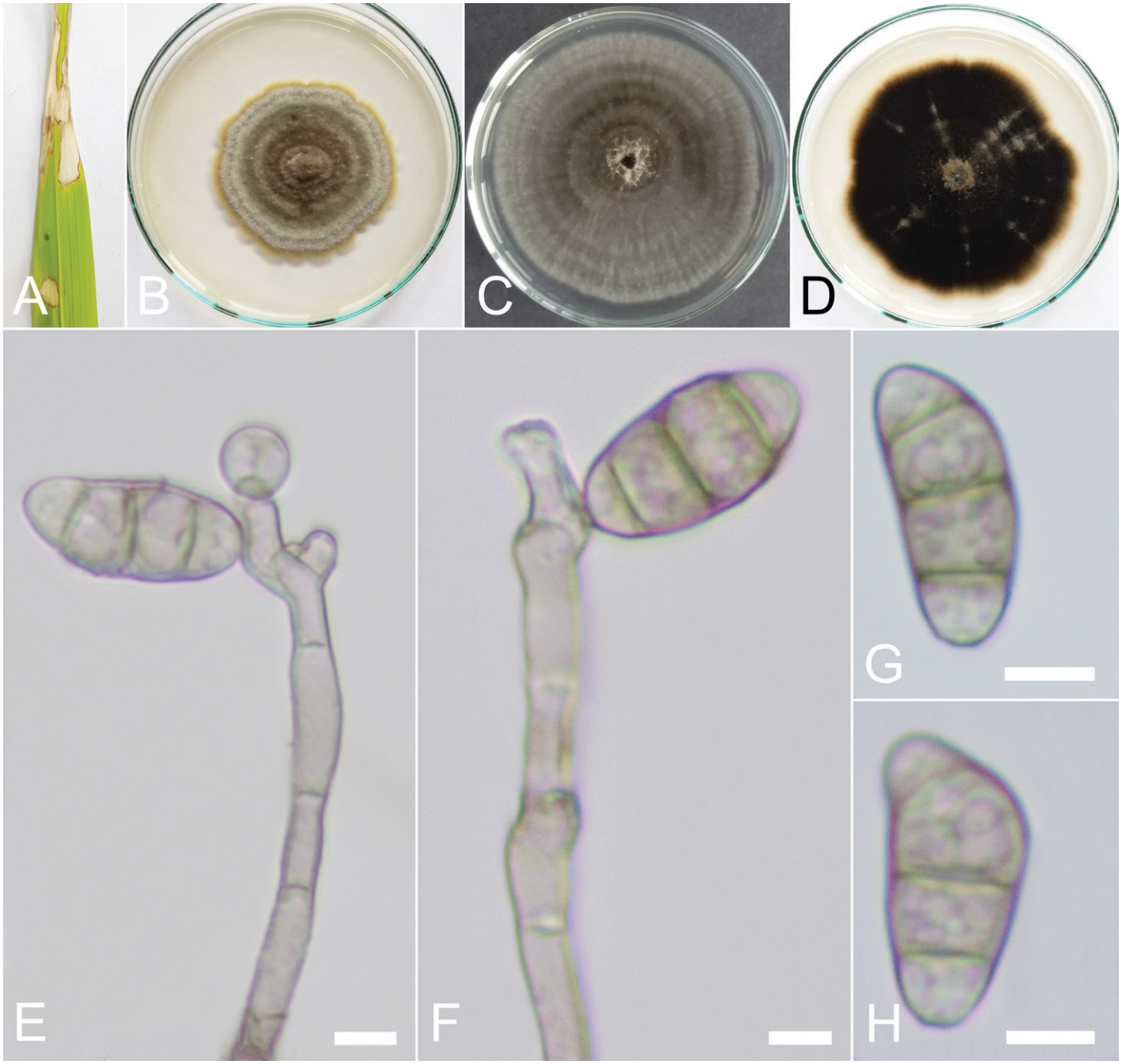

Fig. 6. *Curvularia falsilunata* (USJCC–0053). **A.** Host: leaf blights on *Zea mays*. **B–D.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **E, F.** Conidia attached to conidiophores. **G, H.** Conidia. Scale bars: E, F = 6 µm; G, H = 7 µm.

globose to subglobose, thick-walled, grouped as chains or clumps, terminally and intercalary. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 57 mm diam after 7 d at 25 °C, colonies from above: circular, margin undulate, slightly convex, cottony appearance, pale brown at the margin, dark brown and mouse grey concentric ring growth; reverse: dark brown at the margin, black in the centre. Colonies on CMA reaching 74 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, brown in the centre concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 71 mm diam after 7 d at 25 °C, colonies from above: circular, margin undulate, flat, hairy appearance, dark brown at the margin, black in the centre; reverse: black in the centre to margin.

Materials examined: **Sri Lanka**, North Western Province, Kurunegala District, Nagollagama, N 7.728825 E 80.291368, leaf blights on *Zea mays*, 19 Dec. 2018, *H.S. Ferdinandez*, USJ-H-035, living culture USJCC–0053; North Western Province, Kurunegala District, Nagollagama, N 7.727944 E 80.280785, leaf spots on *Echinochloa crus-galli*, 19 Dec. 2018, *H.S. Ferdinandez*, USJ-H-034, living culture USJCC–0067; Uva Province, Monaragala District, Siyambalanduwa, N 6.892415 E 81.5454107, leaf blight on *Panicum maximum*, 21 Dec. 2021, *H.S. Ferdinandez*, USJ-H-112, living culture USJCC–0140.

Known hosts and distribution: *Saccharum officinarum* in China (Raza *et al.* 2019); *Echinochloa crus-galli*, *Panicum maximum,* and *Zea mays* in Sri Lanka (this study).

Notes: Isolates USJCC–0053, USJCC–0067, and USJCC–0140 were identified as *C. falsilunata*. *Saccharum officinarum* is the only reported host for *C. falsilunata* so far (Raza *et al.* 2019). The fresh isolates were collected from *Echinochloa crus-galli*, *Panicum maximum* and *Zea mays* during this study. Thus, novel host-fungal association records are updated herein. To our knowledge, this is the first record of *C. falsilunata* from Sri Lanka.

Curvularia geniculata (Tracy & Earle) Boedijn*, Bull. Jard. Bot. Buitenz*, 3 Sér. **13**: 129. 1923. MycoBank MB 265873. Fig. 7.
Basionym: *Helminthosporium geniculatum* Tracy & Earle, *Bull. Torrey Bot. Club* **23**: 207. 1896
Synonyms: *Cochliobolus geniculatus* R.R. Nelson, *Mycologia* **56**: 778. 1964.
Pseudocochliobolus geniculatus (R.R. Nelson) Tsuda *et al.*, *Mycologia* **69**: 1118. 1978.

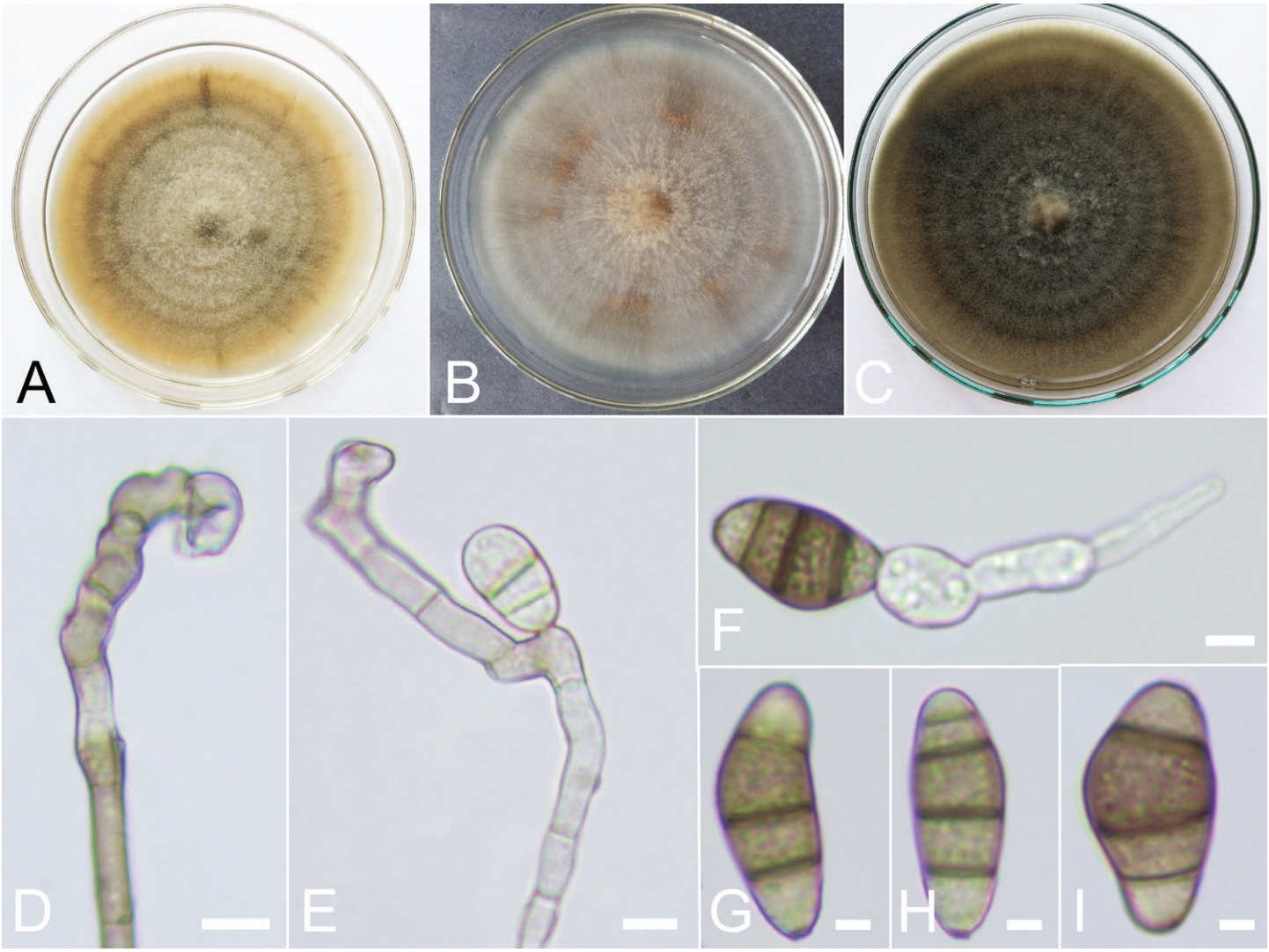

Fig. 7. *Curvularia geniculata* (USJCC–0073). **A–C.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **D.** Conidiophore. **E.** Immature conidium attached to conidiophore. **F.** Germinating conidium. **G–I.** Conidia. Scale bars: D, E = 7 µm; F = 6 µm; G–I = 3 µm.

On leaves of *Saccharum officinarum*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (60–)104–274(–355) × 5–8(–9) µm ($\bar{x}$ = 189 × 6 µm, *n* = 20), pale brown to dark brown, micronematous to macronematous, septate, simple or branched, straight or flexuous, geniculate at the apex. *Conidiogenous cells* 6–10(–11) × (4–)5–6 µm ($\bar{x}$ = 8 × 5 µm, *n* = 20), subhyaline to pale brown, smooth-walled, subcylindrical, terminal or intercalary, mono- to polytretic. *Conidia* (15–)17–23(–29) × (7–)8–11(–13) µm ($\bar{x}$ = 20 × 9 µm, *n* = 30), hyaline to pale brown apical and basal cells, dark brown middle cells in matured conidia, straight or slightly curved, mostly ellipsoidal, sometimes obovoid, dark brown middle septa, enlarged middle cells, 3–4-distoseptate; *hila* 2–3 µm wide, protruding, darkened. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 67 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, slightly raised, cottony appearance, pale brown at the margin, white and grey in the centre; reverse: pale brown at the margin, dark brown in the centre. Colonies on CMA reaching 76 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, mouse grey and pale brown in the centre; reverse: white at the margin, pale brown in the centre. Colonies on MEA reaching 77 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, slightly raised, cottony appearance, dark brown at the margin, black in the centre; reverse: black centre to margin.

Materials examined: **Sri Lanka**, Uva Province, Monaragala District, Sewanagala, N 6.404432 E 80.833103, on leaves of *Saccharum officinarum*, 20 Feb. 2019, *H. S. Ferdinandez*, USJ-H-046, living culture USJCC–0073; Western Province, Gampaha District, Yakkala, N 7.073656 E 80.032788, on grains of *Oryza sativa*, 20 Aug. 2018, *H.S. Ferdinandez*, USJ-H-004, living culture USJCC–0021, Western Province, Gampaha District, Minuwangoda, N 7.170841 E 79.942587, on leaves of *Panicum virgatum*, 24 Oct. 2018, *H.S. Ferdinandez*, USJ-H-012, living culture USJCC–0063; Central Province, Matale District, Palapathwela, N 7.556333 E 80.610611, on panicle of *Sorghum* sp. (Traditional-Swayanjatha), 12 Mar. 2019, *D.S. Manamgoda*, USJ-H-058, living culture USJCC–0037; Southern Province, Hambantota District, Mamadala, N 6.163880 E 80.957413, on leaf of *Zea mays*, 7 Aug. 2019, *H.S. Ferdinandez*, USJ-H-080, living culture USJCC–0039; North Central Province, Anuradhapura District, Thambuttegama, N 8.180449 E 80.321654, on leaves of *Ischaemum* sp., 13 Jun. 2019, *H. S. Ferdinandez*, USJ-H-071, living culture USJCC–0084.

Known hosts and distribution: Plurivorous and cosmopolitan (Farr & Rossman 2022); *Ischaemum* sp., *Oryza sativa*, *Panicum virgatum*, *Saccharum officinarum*, *Sorghum* sp. (Traditional-Swayanjatha), and *Zea mays* in Sri Lanka (this study).

Notes: Isolates USJCC–0021, USJCC–0063, USJCC–0073, USJCC–0037, USJCC–0084 and USJCC–0039 were identified as *C. geniculata*. *Curvularia geniculata* has been recorded as cosmopolitan fungus that most common in tropical regions from various host plant families. Six fresh isolates mentioned here were collected from *Ischaemum* sp., *Oryza sativa*, *Panicum virgatum*, *Saccharum officinarum*, *Sorghum* sp. (Traditional-Swayanjatha), and *Zea mays*. To our knowledge, this is the first record of *C. geniculata* from Sri Lanka.

Curvularia lonarensis Roh. Sharma & Rah. Sharma, *Front. Microbiol*. **7**: 10. 2016. MycoBank MB 814557. Fig. 8.

On leaf spots (approx. 5 cm long) of *Saccharum officinarum*. *Asexual morph*: On CMA *hyphae* 4–5 µm wide, hyaline, septate, branched. *Conidiophores* (75–)132–260(–321) × (4–)5–7(–8) µm ($\bar{x}$ = 196 × 6 µm, *n* = 20), pale brown to dark brown, micronematous to macronematous, septate, simple or branched, straight or flexuous, geniculate at the apex. *Conidiogenous cells* (6–)8–15(–18) × 5–6(–7) µm ($\bar{x}$ = 11 × 6 µm, *n* = 20), subhyaline to pale brown, subcylindrical to swollen, terminal or intercalary, mono- to polytretic. *Conidia* (19–)20–26(–32) × (7–)8–12(–13) µm ($\bar{x}$ = 23 × 10 µm, *n* = 30), hyaline to pale brown basal cell, dark brown matured conidia, straight or curved, mostly asymmetrical, sometimes Y-shaped, dark brown septa, enlarged middle cells, 3-distoseptate; *hila* 1–2 µm wide, flat, darkened. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 87 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, black centre, dark green at the margin; reverse: black centre to margin. Colonies on CMA reaching 86 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, cottony appearance, white at the margin, grey and brown concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 87 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, dark brown to black from centre to margin; reverse: black from centre to margin.

Material examined: **Sri Lanka**, North Central Province, Anuradhapura District, Thuruwila, N 8.251407 E 80.421112, on leaf of *Saccharum officinarum*, 13 Jun. 2019, *H.S. Ferdinandez*, USJ-H-068, living culture USJCC–0082.

Known hosts and distribution: From a hyper alkaline and saline lake called "Lonar" in India (Sharma *et al.* 2016); *Saccharum officinarum* in Sri Lanka (this study).

Notes: Isolate USJCC–0082 was identified as *C. lonarensis*. The fresh isolate was collected from a leaf spot on *Saccharum officinarum*. *Curvularia lonarensis* has only recorded from a sample collected from a lake called "Lonar" in India. To our knowledge, this is a novel host record of *C. lonarensis* on *Saccharum officinarum* and first report from Sri Lanka.

Curvularia lunata (Wakker) Boedijn, *Bull. Jard. Bot. Buitenz*, 3 Sér. **13**: 127. 1933. MycoBank MB 269889. Fig. 9.
Basionym: *Acrothecium lunatum* Wakker, *De Ziektan van het Suikerriet op Java*: **196**. 1898.
Synonyms: *Cochliobolus lunatus* R.R. Nelson & F.A. Haasis, *Mycologia* **56**: 316. 1964.
Pseudocochliobolus lunatus (R.R. Nelson & F.A. Haasis) Tsuda *et al.*, *Mycologia* **69**: 1118. 1978.
Helminthosporium caryopsidum Sacc, *Ann. Mycol.* **12**: 313. 1914
Curvularia caryopsidum (Sacc.) S.C Teng., *Bull. Soc. Sci. Nat. Saône-et-Loire, ser. 2*: 760. 1964.

On leaf spots (approx. 0.5 cm long) of *Zea mays*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (59–)64–95(–116) × 3–4 µm ($\bar{x}$ = 80 × 4 µm, *n* = 20), hyaline to pale brown, micronematous to macronematous, septate, simple or branched, straight, sometimes flexuous,

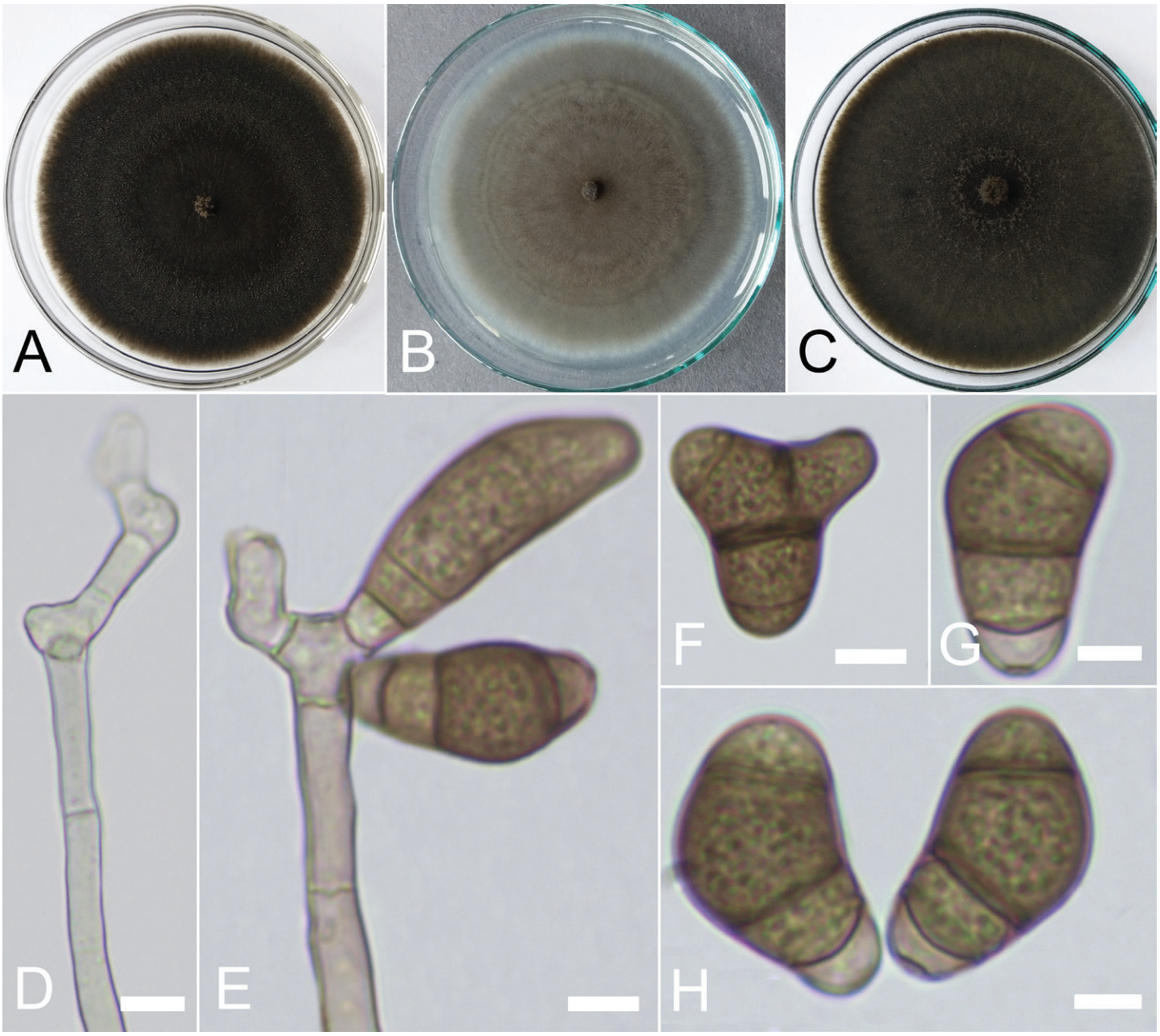

Fig. 8. *Curvularia lonarensis* (USJCC–0082). **A–C.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **D.** Conidiophore. **E.** Conidia attached to conidiophore. **F–H.** Conidia. Scale bars: D, E, G, H = 6 µm; F = 7 µm.

swollen at the base and apex. *Conidiogenous cells* (6–)7–11(–12) × 4–7(–8) µm ($\bar{x}$ = 9 × 6 µm, *n* = 20), hyaline, smooth-walled, swollen, terminal or intercalary, mono- to polytretic. *Conidia* (16–)19–23(–26) × (6–)7–9 µm ($\bar{x}$ = 21 × 8 µm, *n* = 30), hyaline to pale brown, straight or curved, ellipsoidal, asymmetrical, enlarged third cell from base, 3–4-distoseptate; *hila* 1–2 µm wide, flat, darkened. *Chlamydospores* 7–10 µm diam, dark brown, globose, rarely subcylindrical, grouped as clumps, terminal or intercalary. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 83 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, slightly convex, cottony appearance, pale brown at the margin, brown and grey mycelia in concentric ring growth; reverse: dark brown at the margin, black in the centre. Colonies on CMA reaching 85 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, pale brown and grey concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 87 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, cottony appearance, dark green margin, dull green to dark brown centre; reverse: dark brown at the margin, black in the centre.

Materials examined: **Sri Lanka**, Uva Province, Monaragala District, Wellawaya, N 6.609018 E 81.134455, on leaf spots of *Zea mays*, 21 Dec. 2021, *H.S. Ferdinandez*, USJ-H-124, living culture USJCC–0132; North Western Province, Kurunegala District, Uhumiya, N 7.466806 E 80.303167, on leaf of *Panicum virgatum*, 24 Oct. 2018, *H.S. Ferdinandez*, USJ-H-019, living culture USJCC–0023.

Known hosts and distribution: Plurivorous and cosmopolitan (most common in tropical regions) (Farr & Rossman 2022); *Panicum virgatum* and *Zea mays* (this study).

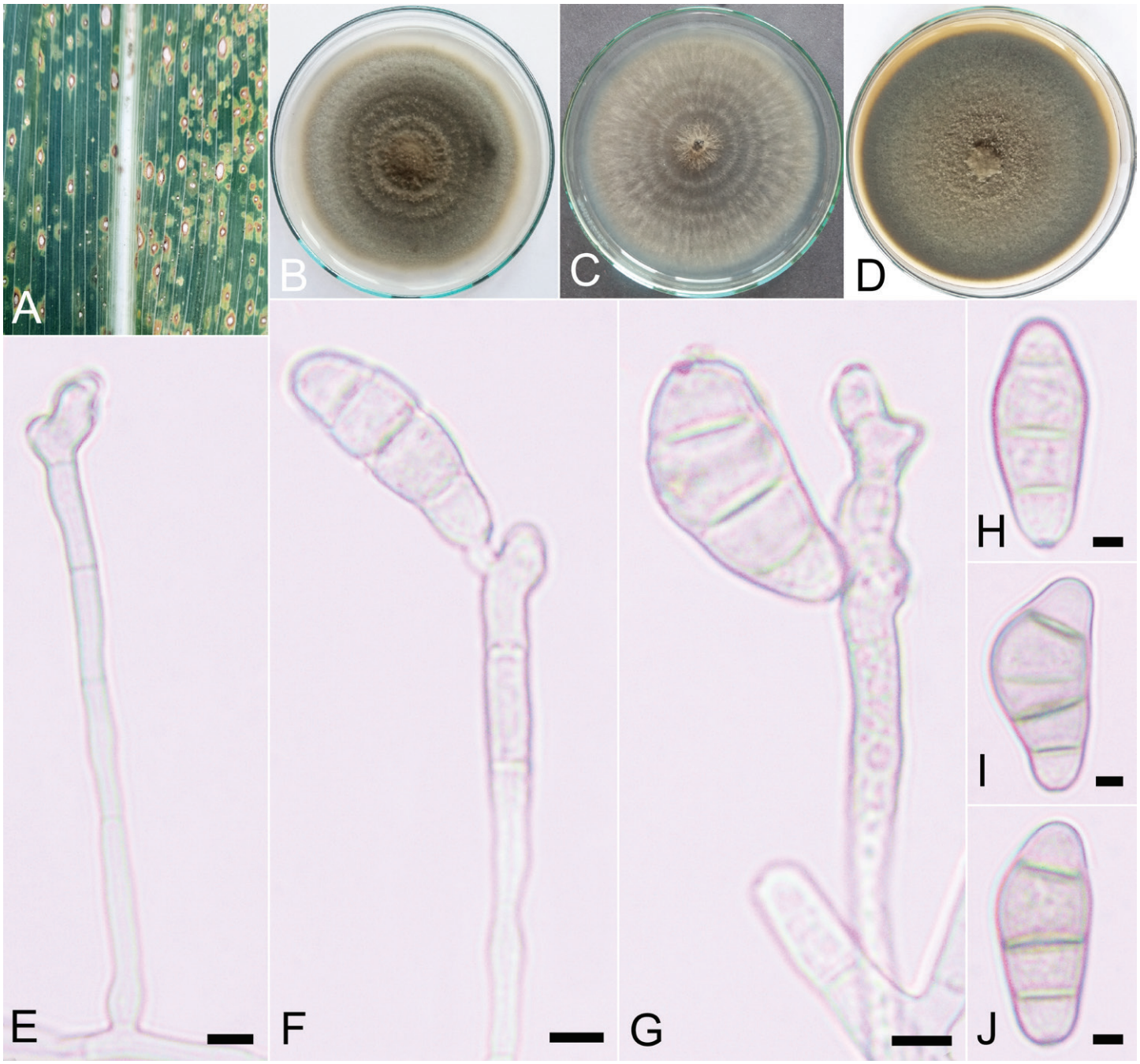

Fig. 9. *Curvularia lunata* (USJCC–0132). **A.** Host: small leaf spots on *Zea mays*. **B–D.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **E.** Conidiophore. **F, G.** Conidia attached to conidiophore. **H–J.** Conidia. Scale bars: E–G = 5 µm; H–J = 3 µm.

Notes: Isolates USJCC–0132 and USJCC–0023 were identified as *C. lunata.* The fresh isolates were collected from *Panicum virgatum* and *Zea mays*. So far, *C. lunata* was recorded from *Oryza sativa* in Sri Lanka (Sivanesan 1987, Adikaram & Yakandawala 2020). To our knowledge, this is the first record of *C. lunata* from *Panicum virgatum* and *Zea mays* in Sri Lanka.

Curvularia muehlenbeckiae Madrid *et al*., *Persoonia* **33**: 56. 2014. MycoBank MB 806055. Fig. 10.

Saprobic on dried panicle of *Sorghum* sp. (Traditional-Swayanjatha). *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (94–)113–212(–255) × (5–)6–8 µm ($\bar{x}$ = 162 × 7 µm, *n* = 20), hyaline to pale brown, micronematous to macronematous, septate, simple or branched, flexuous, sometimes geniculate at the apex. *Conidiogenous cells* (6–)8–14(–17) × (4–)5–7(–8) µm ($\bar{x}$ = 11 × 6 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to irregularly shaped, terminal or intercalary, mono- to polytretic. *Conidia* (17–)19–22(–27) × (9–)10–12(–14) µm ($\bar{x}$ = 21 × 11 µm, *n* = 30), hyaline to pale brown apical and basal cells, pale brown to dark brown middle cells, straight or curved, usually ellipsoidal, sometimes asymmetrical or Y-shaped, rarely clavate, dark brown middle septa, enlarged middle cells, 3-distoseptate; *hila* inconspicuous. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 79 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, pale brown at the margin, dark green to olive green from centre to periphery, concentric ring growth; reverse:

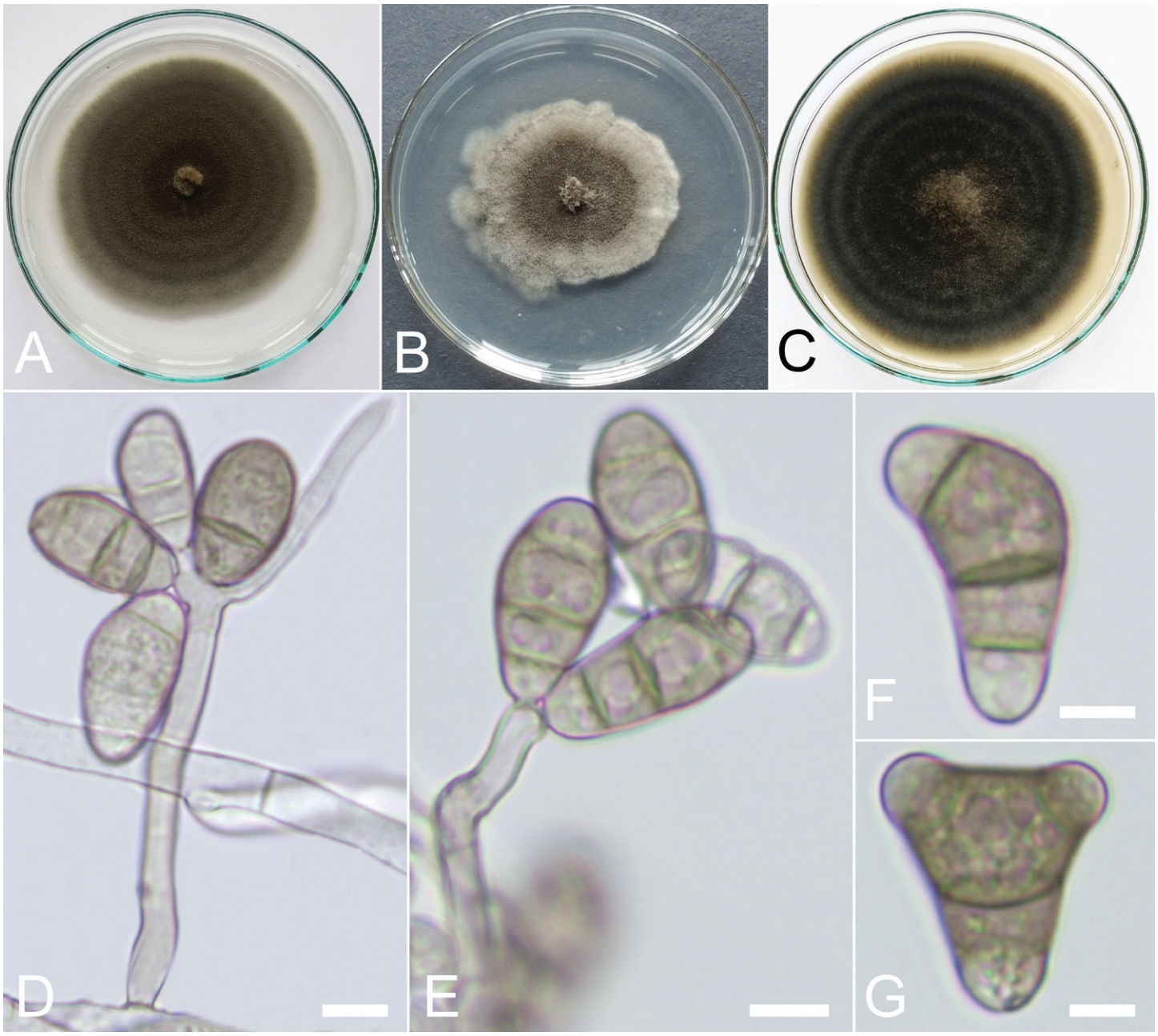

Fig. 10. *Curvularia muehlenbeckiae* (USJCC–0027). **A–C.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **D, E.** Conidia attached to conidiophore. **F, G.** Conidia. Scale bars: D = 7 µm; E = 8 µm; F, G = 6 µm.

olive green at the margin, dark brown in the centre. Colonies on CMA reaching 61 mm diam after 7 d at 25 °C, colonies from above: circular, margin irregular, flat, hairy appearance, white at the margin, grey in the centre; reverse: grey at the margin, black in the centre. Colonies on MEA reaching 84 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, dark green and olive green concentric ring growth, black in the centre; reverse: pale brown at the margin, black in the centre.

Material examined: **Sri Lanka**, Central Province, Matale District, Palapathwela, N 7.556333 E 80.61061, on panicle of *Sorghum* sp. (Traditional-Swayanjatha), 12 Mar. 2019, *D.S. Manamgoda*, USJ-H-061, living culture USJCC–0027.

Known hosts and distribution: *Oryza* sp. in Australia (Khemmuk *et al.* 2016); *Cunninghamia lanceolate* (Cui *et al.* 2020), *Saccharum officinarum* (Raza *et al.* 2019), and *Zizania latifolia* (Chen *et al.* 2021) in China; *Muehlenbeckia* sp. in India (Madrid *et al.* 2014); *Sorghum bicolor* in Japan (Heidari *et al.* 2018); *Sorghum halepense* in Mexico (Olivas-Peraza *et al.* 2022); *Sorghum* sp. in USA (Heidari *et al.* 2018); *Sorghum* sp. (Traditional-Swayanjatha) in Sri Lanka (this study).

Notes: Isolate USJCC–0027 was identified as *C. muehlenbeckiae*. The fresh isolate was collected on a dried panicle of *Sorghum* sp. (Traditional-Swayanjatha). *Curvularia muehlenbeckiae* has so far recorded in Australia, China, India, Japan, Mexico, and USA (Farr & Rossman 2022). To our knowledge, this is the first record of *C. muehlenbeckiae* from Sri Lanka.

Curvularia plantarum M. Raza *et al*., *Fungal Diversity* **99**: 61. 2019. MycoBank MB 556664. Fig. 11.

Leaf spots on *Zea mays*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (142–)167–312(–410) × 5–7 µm ($\bar{x}$ = 240 × 6 µm, *n* = 20), pale brown, hyaline towards the apex, septate, simple or branched, flexuous, micronematous to semi-macronematous, geniculate. *Conidiogenous cells* (5–)6–11(–13) × (3–)4–5(–6) µm ($\bar{x}$ = 8 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to irregularly shaped, terminal or intercalary, mono- to polytretic. *Conidia* (19–)21–25(–28) × (7–)9–11(–12) µm ($\bar{x}$ = 23 × 10 µm, *n* = 30), hyaline apical and basal cells, pale brown to dark brown middle cells, mostly ellipsoidal, sometimes Y-shaped or ovate, straight or curved, enlarged middle cells, 3–4-distoseptate; *hila* 1–2 µm wide, slightly protruding. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 82 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, glistening surface, hairy appearance, pale olivaceous grey to white at the margin, olivaceous black and malachite green concentric ring growth; reverse: dark brown at the margin, black in the centre. Colonies on CMA reaching 87 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, grey and white concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 83 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, pale olivaceous grey at the margin, olivaceous green in the centre; reverse: black in the centre to margin.

Materials examined: **Sri Lanka**, Southern Province, Galle District, Imaduwa, N 6.008556 E 80.373444, on leaves of *Zea mays*, 30 Aug. 2018, *H.S. Ferdinandez*, USJ-H-011, living culture USJCC–0054; North Western Province, Kurunegala District, Nagollagama, N 7.727944 E 80.280785, leaf spots on *Echinochloa crus-galli*, 19 Dec. 2018, *H.S. Ferdinandez*, USJ-H-036, living culture USJCC–0068; North Central Province, Anuradhapura District, Thuruwila, N 8.247372 E 80.419233, on leaf of *Zea mays*, 13 Jun. 2019, *H.S. Ferdinandez*, USJ-H-064, living culture USJCC–0078; Southern Province, Hambantota District, Mamadala, N 6.163880 E 80.957413, on leaf spots of *Zea mays*, 7 Aug. 2019, *H.S. Ferdinandez*, USJ-H-081, living culture USJCC–0091; Central Province, Matale District, Dambulla, N 7.903257 E 80.670494, on leaf spots of *Zea mays*, 15 Aug. 2019, *H.S. Ferdinandez*, USJ-H-088, living culture USJCC–0097; North Western Province, Puttalam District, Garayakgama, N 7.793702 E 79.955101, on panicles of *Oryza sativa,* 29 Jan. 2020, *H.S. Ferdinandez*, USJ-H-092, living culture USJCC–0033.

Known hosts and distribution: *Saccharum officinarum* in China (Raza *et al.* 2019); *Eleusine coracana, Oryza sativa, Panicum virgatum*, and *Paspalum* sp., in Sri Lanka (Ferdinandez *et al.* 2021); *Echinochloa crus-galli*, *Oryza sativa,* and *Zea mays* in Sri Lanka (this study).

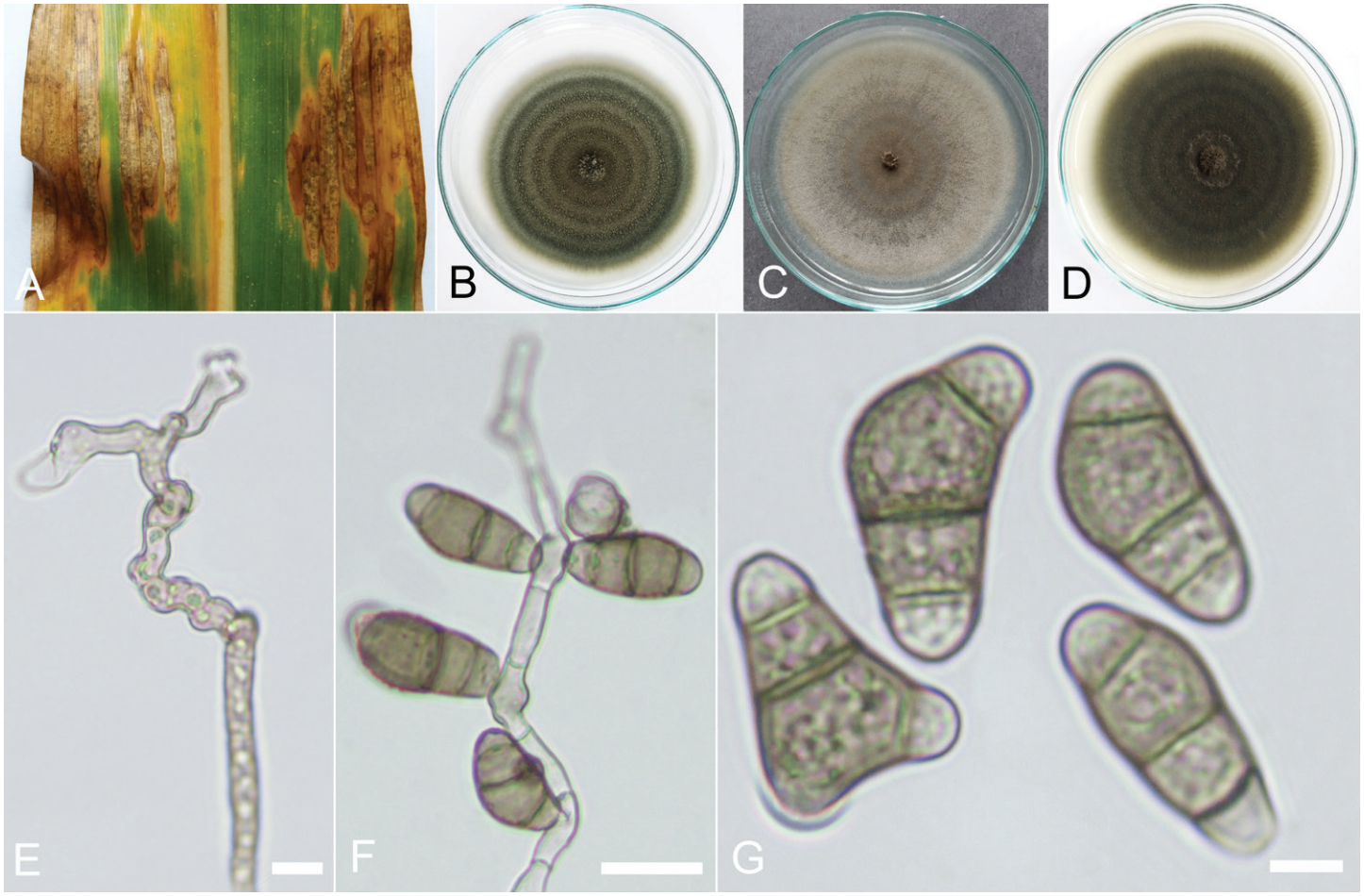

Fig. 11. *Curvularia plantarum* (USJCC–0091). **A.** Host: leaf lesions on *Zea mays*. **B–D.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **E.** Conidiophore. **F.** Conidia attached to conidiophore. **G.** Conidia. Scale bars: E = 8 µm; F = 16 µm; G = 5 µm.

Notes: Fresh isolates USJCC–0054, USJCC–0091, USJCC–0078, and USJCC–0097 which were collected from *Zea mays*, USJCC–0068 from *Echinochloa crus-galli*, and USJCC–0033 from *Oryza sativa* were identified as *C. plantarum*. *Curvularia plantarum* was first reported from *Saccharum officinarum* in China. Later on, Ferdinandez *et al*. (2021) reported *C. plantarum* in Sri Lanka from *Eleusine coracana, Oryza sativa, Panicum virgatum*, and *Paspalum* sp. Thus, the occurrence of *C. plantarum* on *Echinochloa crus-galli*, and *Zea mays* update the novel host-fungal association records herein.

Curvularia pseudobrachyspora Y. Marín *et al*., *Mycosphere* **8**: 1569. 2017. MycoBank MB 822085. Fig. 12.

Saprobic on panicles of *Zea mays*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (70–)98–184(–204) × 5–6 µm ($\bar{x}$ = 141 × 6 µm, *n* = 20), pale brown to brown, micronematous to macronematous, simple, septate, straight or flexuous. *Conidiogenous cells* (6–)7–13(–16) × (3–)4–5(–6) µm ($\bar{x}$ = 10 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to swollen, terminal or intercalary, mono- to polytretic. *Conidia* (16–)19–23(–25) × (7–)8–9(–10) µm ($\bar{x}$ = 21 × 9 µm, *n* = 30), hyaline or pale brown basal and apical cells, pale brown to dark brown middle cells, straight or curved, ellipsoidal or asymmetrical, 3-distoseptate; *hila* inconspicuous. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 49 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, pale brown at the margin, dull green and mouse grey concentric ring growth; reverse: brown at the margin, dark green in the centre. Colonies on CMA reaching

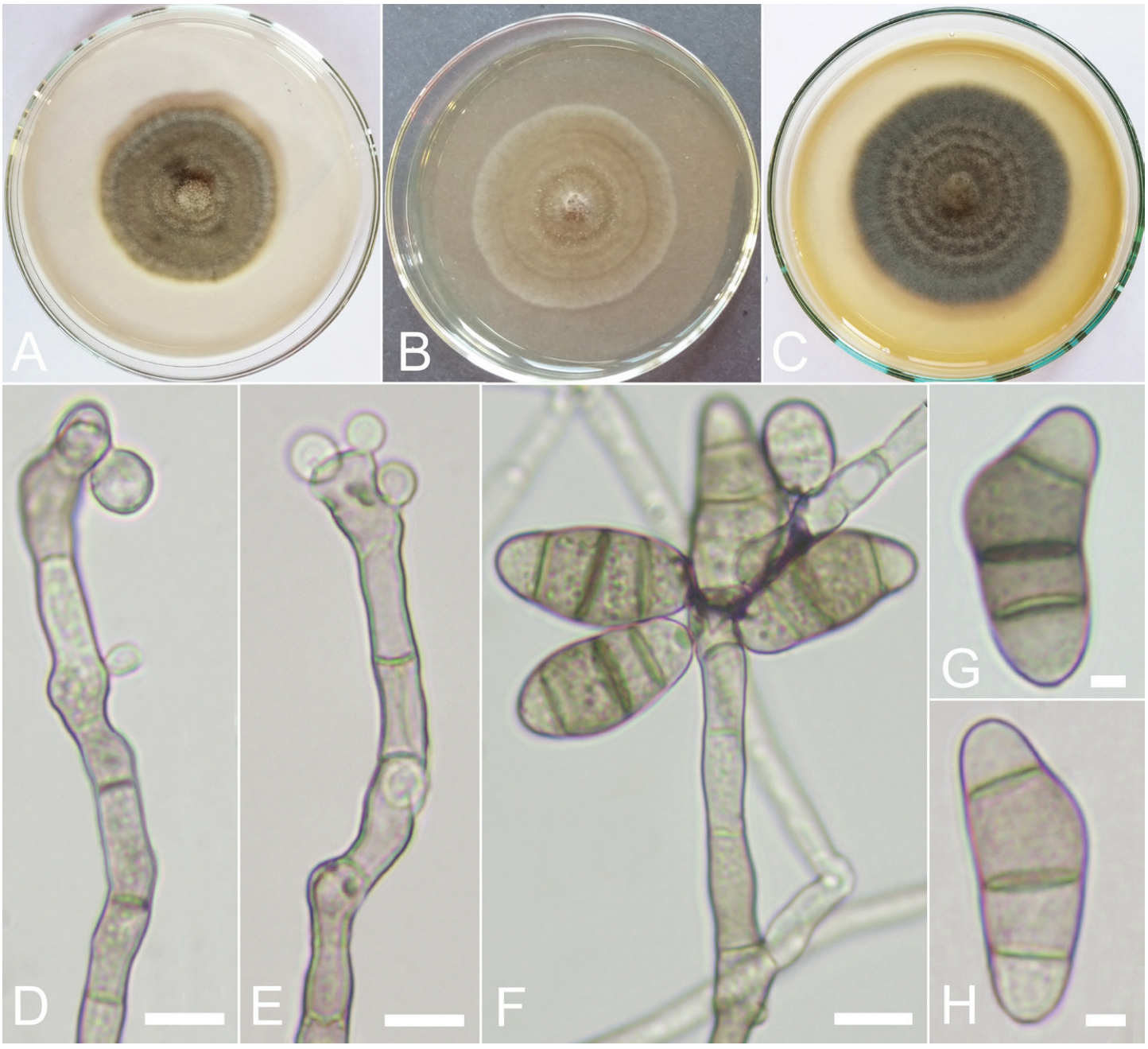

Fig. 12. *Curvularia pseudobrachyspora* (USJCC–0024). **A–C.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **D, E.** Conidiophores with immature conidia. **F.** Conidia attached to conidiophore. **G, H.** Conidia. Scale bars: D, E = 7 µm; F = 9 µm; G, H = 3 µm.

57 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, grey and brown concentric ring growth; reverse: grey at the margin, brown in the centre. Colonies on MEA reaching 67 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, velvety appearance, dull green and brown concentric ring growth; reverse: dark brown in the centre to margin.

Materials examined: **Sri Lanka**, Central Province, Matale District, Palapathwela, N 7.556333 E 80.61061, on panicle of *Zea mays*, 8 Nov. 2018, *D.S. Manamgoda*, USJ-H-030, living culture USJCC–0024; North Central Province, Anuradhapura District, Thuruwila, N 8.247372 E 80.419233, on leaves of *Panicum virgatum,* 13 Jun. 2019, *D.S. Manamgoda*, USJ-H-072, living culture USJCC–0085.

Known hosts and distribution: *Pennisetum* sp. in Denmark (Marin-Felix *et al.* 2020); *Cocos nucifera* in Ghana (Lekete *et al.* 2022); *Acorus calamus* in India (Srivastava *et al.* 2019); *Areca catechu* (Wang *et al.* 2019) and *Lilium brownii* var. *viridulumin* (Zeng *et al.* 2020) in China; *Eleusine indica* (Marin-Felix *et al.* 2017b) and *Oryza sativa* (Marin-Felix *et al.* 2020) in Thailand; *Agropyron repens* (Marin-Felix *et al.* 2020), *Cannabis sativa* (Marin *et al.* 2020), *Pennisetum glaucum*, and *Trisetum* sp. in USA (Marin-Felix *et al.* 2020); *Panicum virgatum* and *Zea mays* in Sri Lanka (this study).

Notes: Isolates USJCC–0024 and USJCC–0085 were identified as *C. pseudobrachyspora.* According to the phylogram (Fig. 1), two fresh isolates are closely related to *C. pseudobrachyspora* and *C. protuberans.* Ellipsoidal to obovoid conidia of *C. pseudobrachyspora* [(16–)21.5–27(–28.5) × 8–14 µm] are closer to morphological data from the fresh isolates in this study. Conidia of *C. protuberans* are obovoid to asymmetrical and smaller (9.5–25.5 × 6–19.5 µm) than the above-mentioned species. To date, *C. pseudobrachyspora* has never been reported from *Panicum virgatum* and *Zea mays.* Thus, novel host-fungal association records are updated herein. To our knowledge, this is the first record of *C. pseudobrachyspora* from Sri Lanka.

Curvularia verruculosa Tandon & Bilgrami *ex* M.B. Ellis, *Mycol. Pap.* **106**: 20. 1966. MycoBank MB 329454. Fig. 13.

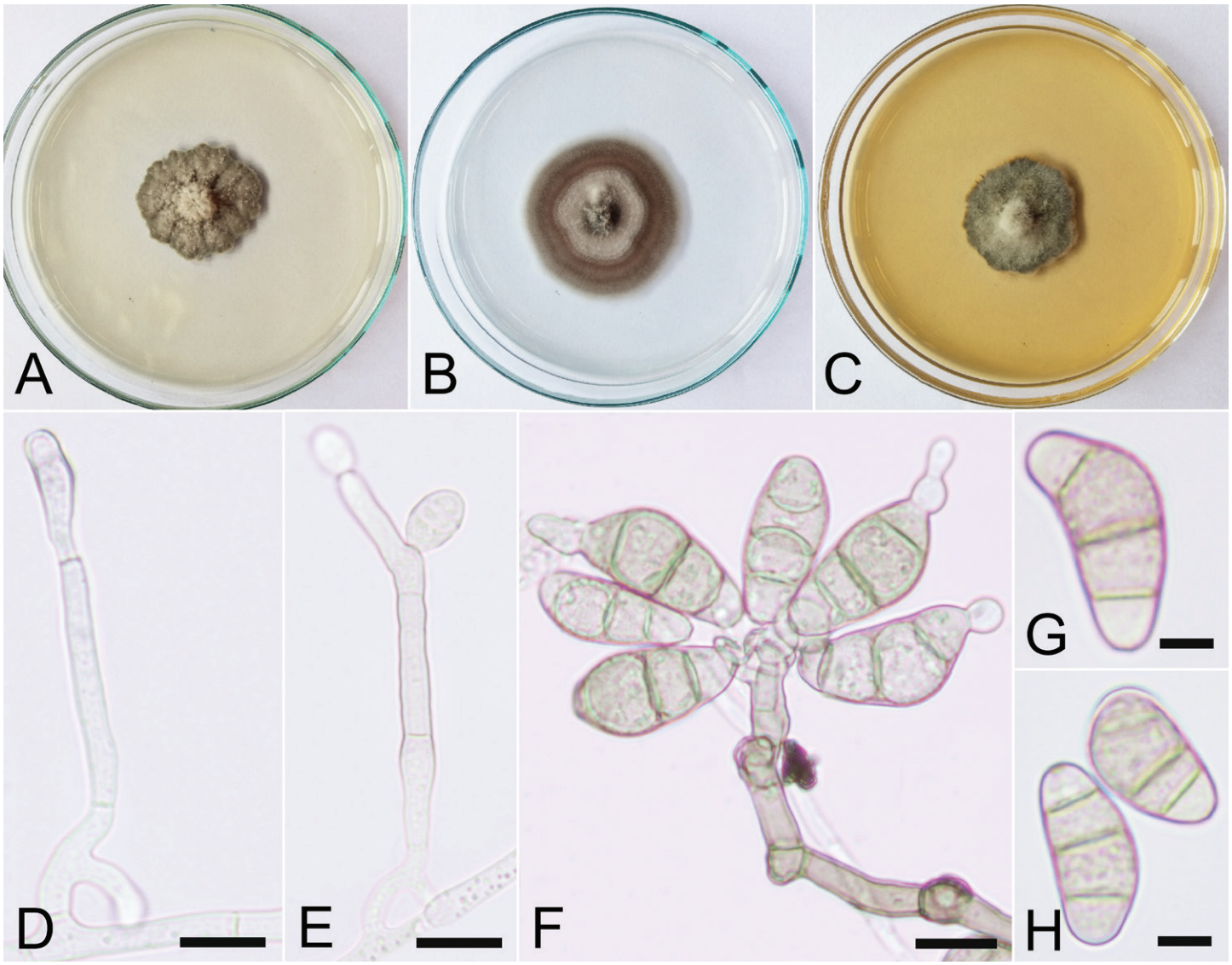

Fig. 13. *Curvularia verruculosa* (USJCC–0028). **A–C.** Seven-day-old colony on PDA, CMA, and MEA, respectively. **D.** Conidiophore. **E.** Conidiophore with immature conidia **F.** Conidia attached to conidiophore. **G, H.** Conidia. Scale bars: D–F = 12 µm; G, H = 6 µm.

Leaf blights on *Oryza sativa*. *Asexual morph*: On CMA *hyphae* 3–4 µm wide, hyaline, septate, branched. *Conidiophores* (50–)85–248(–333) × 4–7(–8) µm ($\bar{x}$ = 167 × 5 µm, *n* = 20), hyaline to pale brown, micronematous to macronematous, septate, simple, forming clamps at the base, straight or flexuous. *Conidiogenous cells* (7–)9–19(–22) × 4–6(–7) µm ($\bar{x}$ = 14 × 5 µm, *n* = 20), hyaline to pale brown, smooth-walled, subcylindrical to slightly swollen, terminal or intercalary, mono- to polytretic. *Conidia* (18–)22–28(–31) × (6–)8–10(–11) µm ($\bar{x}$ = 25 × 9 µm, *n* = 30), hyaline to pale brown, curved, obovoid or asymmetrical, enlarged middle cells, 3-distoseptate; *hila* inconspicuous. *Chlamydospores* 12–15 µm diam, dark brown, subglobose or cylindrical, thick-walled, terminally and intercalary. *Microconidiation* is observed. *Sexual morph* not observed.

Culture characteristics: Colonies on PDA reaching 26 mm diam after 7 d at 25 °C, colonies from above: irregular, margin undulate, slightly convex, velvety appearance, dull green at the margin, mouse grey in the centre; reverse: dark green at the margin, black in the centre. Colonies on CMA reaching 37 mm diam after 7 d at 25 °C, colonies from above: circular, margin entire, flat, hairy appearance, white at the margin, grey in the centre, dark brown to periphery, concentric ring growth; reverse: pale brown at the margin, dark brown in the centre. Colonies on MEA reaching 28 mm diam after 7 d at 25 °C, colonies from above: circular, margin undulate, convex, velvety appearance, dull green at the margin, grey in the centre; reverse: black centre to margin.

Materials examined: **Sri Lanka**, North Western Province, Puttalam District, Eluwankulama, N 8.273258 E 79.875740, leaf blights on *Oryza sativa*, 29 Jan. 2020, *H.S. Ferdinandez*, USJ-H-100, living culture USJCC–0028; Southern Province, Hambantota District, Mamadala, N 6.163880 E 80.957413, on leaf of *Zea mays*, 7 Aug. 2019, *H.S. Ferdinandez*, USJ-H-090, living culture USJCC–0031; North Western Province, Puttalam District, Garayakgama, N 7.793702 E 79.955101, leaf spots on *Saccharum officinarum*, 29 Jan. 2020, *H.S. Ferdinandez*, USJ-H-098, living culture USJCC–0103.

Known hosts and distribution: Plurivorous and cosmopolitan (Farr & Rossman 2022), *Oryza sativa, Saccharum officinarum*, and *Zea mays* in Sri Lanka (this study).

Notes: Isolates USJCC–0028, USJCC–0031, and USJCC–0103 were identified as *C. verruculosa*. It has been recorded from subtropical and tropical regions all over the world from a variety of host plant families. The fresh isolates were collected from *Oryza sativa, Saccharum officinarum,* and *Zea mays* during this study. To our knowledge, this is the first record of *C. verruculosa* from Sri Lanka.

DISCUSSION

The pleosporalean genus *Curvularia* is a well-established monophyletic genus in the *Dothideomycetes* with a wide geographic range. However, morphological characters and ITS sequences alone are insufficient to accurately identify individual species. Thus, majority of the recent publications have effectively used additional markers [*i.e.* 28S/large subunit of the nuclear ribosomal DNA (LSU), *gapdh*, second-largest subunit of RNA polymerase II (*rpb2*), and *tef1*] (Hernández-Restrepo *et al.* 2018, Manamgoda *et al.* 2012, 2015, Madrid *et al.* 2014, Marin-Felix *et al.* 2017a, 2017b, Tan *et al.* 2018, Marin-Felix *et al.* 2020). During the last five years, a considerable number of new *Curvularia* species have been introduced (Hyde *et al.* 2017, Marin-Felix *et al.* 2017a, b, 2020, Dehdari *et al.* 2018, Heidari *et al.* 2018, Liang *et al.* 2018, Mehrabi-Koushki *et al.* 2018, Tan *et al.* 2018, Tibpromma *et al.* 2018, Kiss *et al.* 2020, Raza *et al.* 2019, Zhang *et al.* 2020, Ferdinandez *et al.* 2021).

In this study, sequences of 36 fresh isolates were compared with those from type cultures as well as published reference cultures for species of *Curvularia*. Multi-locus phylogenetic analyses from a combined data set of ITS, *gapdh*, and *tef1* along with morphological attributes were employed to identify species and confirm the morphological differences of novel species. Both novel species *C. aurantia* and *C. vidyodayana* were collected from specimens of two major poaceous crops in Sri Lanka, *Zea mays* and *Oryza sativa*, respectively. Other than the novel species, new host records were updated for *C. chiangmaiensis*, *C. falsilunata*, *C. lonarensis*, *C. plantarum*, and *C. pseudobrachyspora*. Moreover, five species (*C. asiatica*, *C. geniculata*, *C. lunata*, *C. muehlenbeckiae*, and *C. verruculosa*) represent new records for the mycobiota of Sri Lanka. These new records reveal the need for redefining the host range and geographic distribution of species within the genus. Even though the species described here are generally minor pathogens, endophytes or saprobes, more concern should be noted as they can cause devastating diseases by switching life modes (Rai & Agarkar 2016). The present study is helpful as it conveys information necessary for future studies on control and management of fungi occurring in commercially important poaceous crops including *Oryza sativa*, *Saccharum officinarum*, *Sorghum* sp., and *Zea mays*. Moreover, description of these species improves knowledge of their host ranges and updates the checklist of fungi from Sri Lanka.

ACKNOWLEDGMENTS

The authors gratefully acknowledge the University of Sri Jayewardenepura for Research Grant ASP/01/RE/SCI/2018/036 and ASP/01/RE/SCI/2021/014 to work on the dematiaceous hyphomycetous fungi of Sri Lanka. The Department of Botany, Faculty of Applied Sciences and Department of Biosystems Technology, Faculty of Technology are thanked for laboratory facilities. The use of trade, firm, or corporation names in this publication is for the information and convenience of the reader. Such use does not constitute an official endorsement or approval by the United States Department of Agriculture or any other affiliated institute of the authors. The USDA is an equal opportunity employer. LAC is funded by USDA-ARS National Program 303, Project # 8042-22000-323-00D.

Conflict of interest: The authors declare that there is no conflict of interest.

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