



Redisposition of species from the *Guignardia* sexual state of *Phyllosticta*

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Abstract

Several species named in the genus “*Guignardia*” have been transferred to other genera before the commencement of this study. Two families and genera to which species are transferred are Botryosphaeriaceae (*Botryosphaeria*, *Vestergrenia*, *Neodeightonia*) and Hyphonectriaceae (*Hyphonectria*). In this paper, new combinations reported include *Botryosphaeria cocöes* (Petch) Wulandari, **comb. nov.**, *Vestergrenia atropurpurea* (Chardón) Wulandari, **comb. nov.**, *V. dinochloae* (Rehm) Wulandari, **comb. nov.**, *V. tetrazygiae* (Stevens) Wulandari, **comb. nov.**, while six taxa are synonymized with known species of *Phyllosticta*, viz. *Phyllosticta effusa* (Rehm) Sacc. [= *Botryosphaeria obtusae* (Schw.) Shoemaker], *Phyllosticta sophorae* Kantshaveli [= *Botryosphaeria ribis* Grossenbacher & Duggar], *Phyllosticta haydenii* (Berk. & M.A. Kurtis) Arx & E. Müller [= *Botryosphaeria zaeae* (Stout) von Arx & E. Müller], *Phyllosticta justiciae* F. Stevens [= *Vestergrenia justiciae* (F. Stevens) Petr.], *Phyllosticta manokwaria* K.D. Hyde [= *Neodeightonia palmicola* J.K Liu, R. Phookamsak & K. D. Hyde] and *Phyllosticta rhamnii* Reusser [= *Hyphonectria cf. buxi* (DC) Sacc.]. In this paper, identification of “*Guignardia*” species is based on morphological characteristics. A large number of taxa labeled as “*Guignardia*” in literature, could not be loaned from various herbaria, or are lost or untraceable are listed as ‘doubtful species’ in view of insufficient supportive taxonomic data. Fresh collections, cultures and molecular sequence data are needed to clarify the phylogeny and taxonomy of cryptic species.

Key words – Dothideomycetes – *Guignardia* – plant diseases – saprobes – taxonomy

Introduction

In a recent work, 34 species in the genus *Phyllosticta* are accepted (Wulandari et al. 2013). The sexual state of *Phyllosticta*, “*Guignardia*”, has previously been studied by several authors (Van der Aa 1973, Punithalingham 1974, Sivanesan 1984, Hyde 1995, Okane et al. 2001, Van der Aa & Vanev 2002, Okane et al. 2003, Motohashi et al. 2008, Wulandari et al. 2009, Motohashi et al. 2010). The species of *Guignardia* have earlier been synonymized in genera such as *Botryosphaeria*, (Yamamoto 1961) and *Glomerella* (Arx & Müller 1954). Presently, species of *Guignardia* are synonymized with 24 different genera. These include, *Apioplagiostoma*, *Laestadia*, *Hyphonectria* (Hyphonectriaceae: Incertia sedis), *Glomerella* (Phyllachoraceae?: Phyllachorales), *Apiosporopsis*

(Sordariales), *Polystigma*., *Obryzum*, *Discosphaerina*, *Physalospora*, *Gelatinopsis*, *Lichenosticta*, *Didymella* (Dothideales: Incertae Sedis), *Plectosphaera*, *Verrucaria*, *Haloguignardia*, *Phyllachora* (Phyllachoraceae: Phyllachorales), *Botryosphaeria* (Botryosphaeriaceae: Dothideales), *Diaporthe* (Diaporthales), *Mycosphaerella* (Mycosphaerellaceae: Dothideales), *Rosselliniella*, *Puiggarrina*, *Tellogalla*, *Catapyrenium*, *Isothea*, *Plectosphaera*, *Valsella* (Valsaceae: Diaporthales) and *Turgidosculum* (Index Fungorum-<http://www.indexfungorum.org/>; accessed December 2012). This is primarily because this genus had a wide inclusiveness and any fungus with unicellular ascospores, any type of asci and simple ascomata were placed in this genus.

In this paper, we dealt with 304 species of sexual *Phyllosticta* (“Guignardia”) and transferred several of them to appropriate species, but a large number are listed as doubtful species in view of insufficient supportive data. The aim of this paper is to redescribe some of the valid species which otherwise were not listed as “Guignardia” and to list those labeled as “Guignardia” but unable to be loaned, lost, traceable or doubtful species.

Materials & Methods

Holotype specimen in the name of “Guignardia” were loaned from various International herbaria worldwide. Morphological examinations were done following the procedure described by Wulandari et al. (2010). Melzer’s solution was used to identify the J- and J+ for unitunicate asci. All line drawings and photo-plates are prepared by the first author. Annotations were made for the loaned holotype specimen.

In Section I which includes all redispersed taxa, for each species, taxonomic nomenclature with citation, synonymy, MycoBank number (for new combinations only), species diagnosis, details of examined specimen and brief notes are given. In Section II which accommodates doubtful, untraceable, missing and invalid species of “Guignardia”, details on taxonomy, citation, synonymy, herbarium, present status and needful notes are provided in tabular form. Wherever possible, descriptions are supported with photo-plates and line drawings of fungi.

Results

In this study of 304 taxa of sexual *Phyllosticta* (“Guignardia”), 14 species are transferred to 4 genera in 3 families and described in detail. The order and families to which species transferred include Botryosphaeriaceae (*Botryosphaeria* spp., *Vestergrenia* spp., *Neodeightonia* sp.) in Botryosphaeriales and Hyphonectriaceae (*Hyponectria* sp.). Of the remaining, 107 species are considered doubtful, lost or untraceable. The rest 183, so called “Guignardia” species, found in literature including Index Fungorum-<http://www.indexfungorum.org/> could not be loaned during the time frame of the study. These 290 species of “Guignardia” are tabulated in Table 2 with details sourced from literature. It is hoped that the facts provided here will encourage and facilitate future workers to recollect fresh specimens and undertake further morpho-molecular studies.

Taxonomy:

Redisposition of species of Guignardia

Section 1: Transferred species

Botryosphaeriales C.L. Schoch, Crous & Shoemaker, in Schoch, Shoemaker, Seifert, Hambleton, Spatafora & Crous, *Mycologia* 98(6): 1050 (2007) [2006]

Botryosphaeriales presently comprises three families, *Botryosphaeriaceae* (29 genera), *Phyllostictaceae* (5 genera), and *Planistromataceae* (2 genera) (Liu et al. 2012, Hyde et al. 2013, Monkai et al. 2013).

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

Botryosphaeria Theiss. & Syd. [as 'Botryosphaeriaceae'], *Annls mycol.* 16(1/2): 16 (1918)

Botryosphaeria cocöes (Petch) Wulandari, **comb. nov.**

(Fig. 1a-g)

Index Fungorum: IF550638

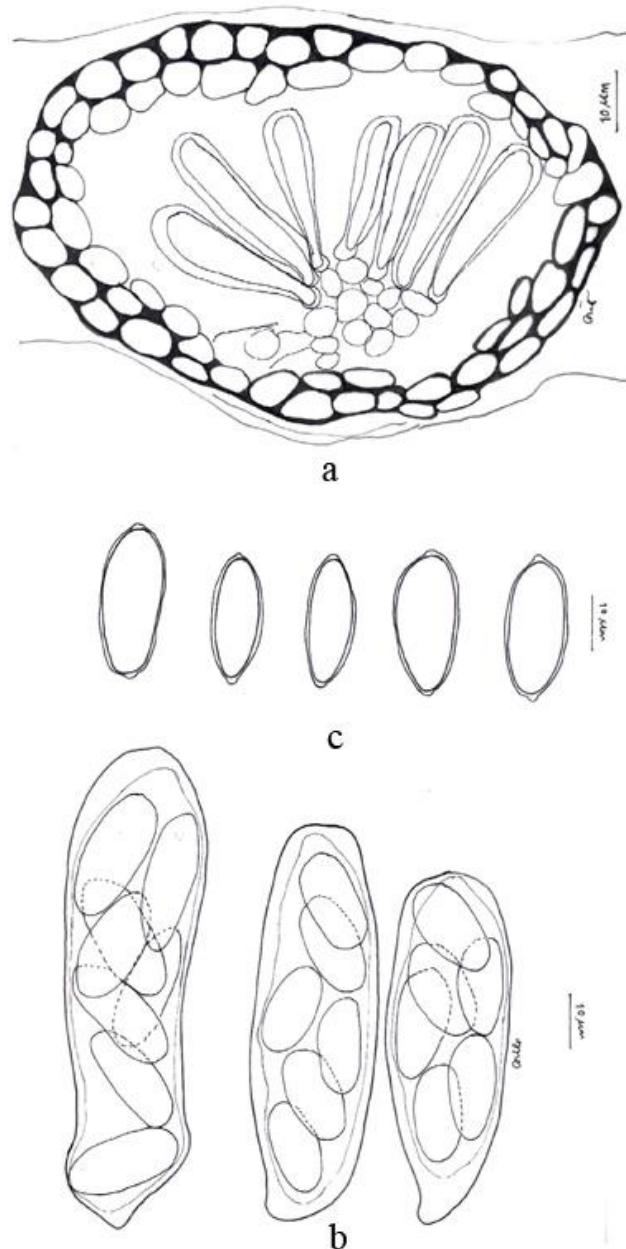
= *Guignardia cocöes* (Petch) K.D. Hyde (1995); MycoBank: MB 447509

≡ *Desmotascus cocöes* Petch [as 'cocoes'] 1922

Pathogenic causing leaf spots. *Leaf spots* brown, necrotic, with concentric rings of blackened dots. *Ascomata* developing under raised, carbonaceous, slightly darkened areas, occasionally erumpent and cracking the host surface, mostly solitary, in vertical section 250–300 μm diam., subglobose, immersed beneath the host cuticle, ostiolate. *Peridium* up to 25 μm wide, composed of a few layers of brown-walled angular cells. *Pseudoparaphyses* not observed. *Asci* 75–125 \times 20–25 μm , 8-spored, clavate, pedicellate, bitunicate, fissitunicate, apically rounded, with an ocular chamber. *Ascospores* 23–26.5 \times 9–10 μm , 2–3-seriate irregularly ellipsoidal, 1-celled, hyaline, with apical button-like germ pores and remnants of mucilage on the surface.

Material examined – SOLOMON ISLANDS, on leaves of *Cocos nucifera*, June 1917, Petch (K, from holotype of *Guignardia cocöes*).

Notes – This species is not a *Guignardia* but a species of *Botryosphaeria*. It is different from other species in the genus *Botryosphaeria* by ornamented, thick-walled ascospores. Known distribution of the fungus is in Solomon Islands (Sivanesan 1984, Hyde 1995).



Figs 1a–c – *Botryosphaeria cocöes* (K, from holotype of *Guignardia cocöes*). a, Peridium comprising one strata of 2–4 cells *textura angularis* with thickened brown walls. b, Asci. c, Ascospores. – Scale bars a-c = 10 μm .

Botryosphaeria obtusae (Schw.) Shoemaker, Canadian Journal of Botany 42: 1298 (1964)

(Fig. 2a-i)

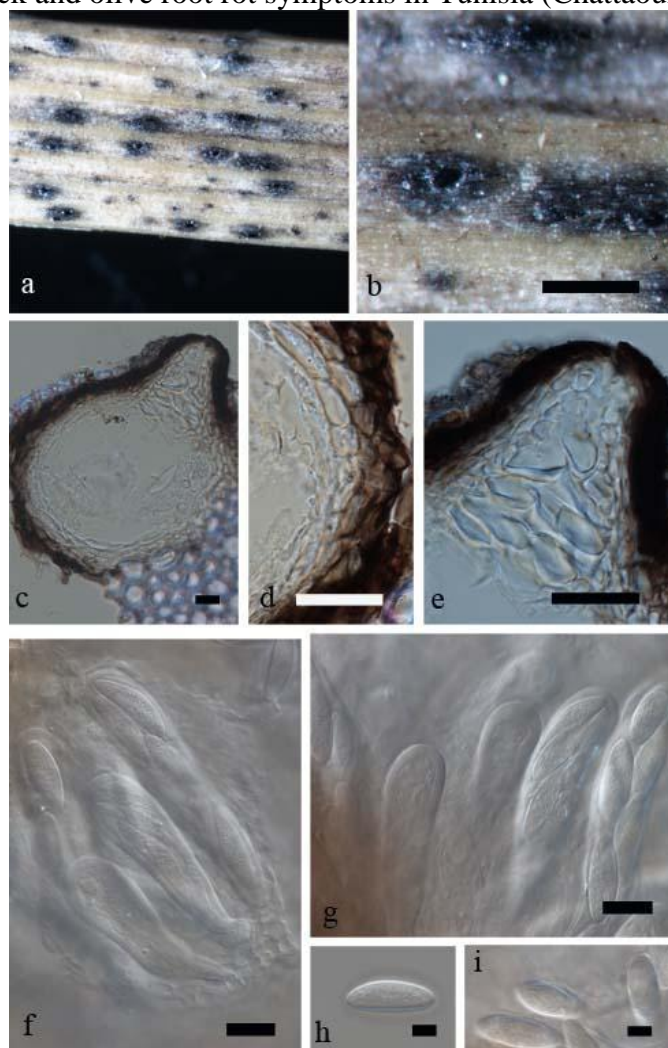
= *Guignardia effusa* (Rehm) Sacc., Syll. fung. (Abellini) 24(2): 784 (1928) MycoBank: MB 213834

≡ *Laestadia effusa* Rehm (1915), Annls mycol. 13(1): 4 (1915)

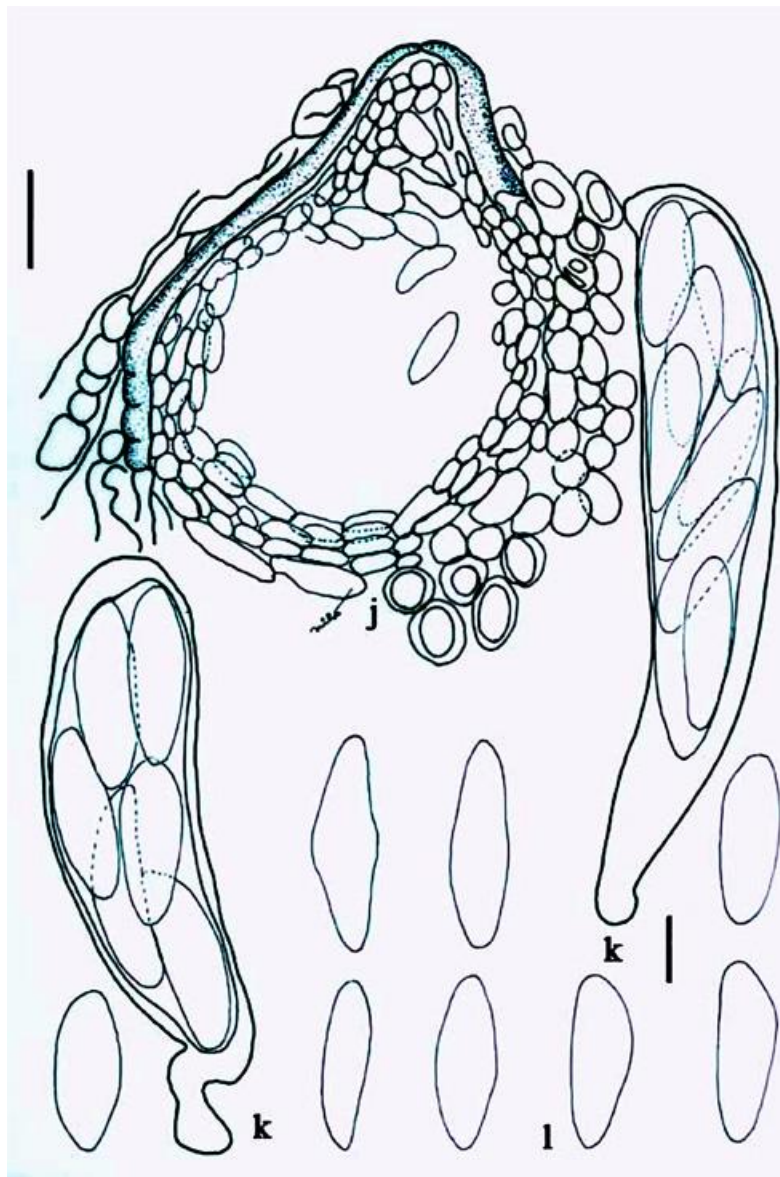
Ascomata 150–200 μm diam., 155–200 μm high, scattered, solitary, dark brown to black, globose to subglobose, immersed to semi-immersed in plant tissues. *Peridium* 15–20 μm wide, one strata of 2–4 layers of cells *textura angularis* with thickened brown walls around ostiole. *Asci* 70–145 \times 11–25 μm (\bar{x} = 100 \times 20 μm , n = 20), 8-spored, bitunicate, cylindrical to cylindric-clavate, rounded at the apex where the diam. is 10–20 μm , tapering gradually to 15–26 \times 5–7 μm long pedicel attached to the basal peridium. *Ascospores* 20–30 \times 7–10 μm (\bar{x} = 25 \times 10 μm , n = 20), irregularly biseriate, fusoid, wider around the mid region, hyaline to greenish, 1-celled, guttulate, smooth-walled, without mucilaginous sheath at the ends.

Material examined – UK, London, on stems of *Milium effusum*, 31 January 1914 (F 10850, from holotype of *Guignardia effusa*).

Notes – *Botryosphaeria obtusae*, conforms its identity, as the morphological characters are similar with the description given by Sivanesan (1984). The asexual state is *Diplodia seriata* (Sivanesan 1984). *Botryosphaeria obtusae* is responsible for one of important plant diseases in Tunisia, olive tree branch dieback (Chattaoui et al. 2012). ITS 1 and ITS 4 were used to identify this species from dieback and olive root rot symptoms in Tunisia (Chattaoui et al. 2012).



Figs 2a–i – *Botryosphaeria obtusae* (FS 10850, from holotype of *Guignardia effusa*). a, b Ascomata on host surface. c–e Peridium comprising one strata of 2–4 cells *textura angularis* with thickened brown walls. f, g Asci. h, i Ascospores. – Scale bars b, c = 100 μm , d = 40 μm , e, f = 10 μm , g = 20 μm .



Figs 2j–l – *Botryosphaeria obtusae* (F 10850, from holotype of *Guignardia effusa*) line drawing. j, Peridium comprising one strata of 2–4 cells *textura angularis* with thickened brown walls. k, Asci. l, Ascospores. – Scale bars = 25 μ m.

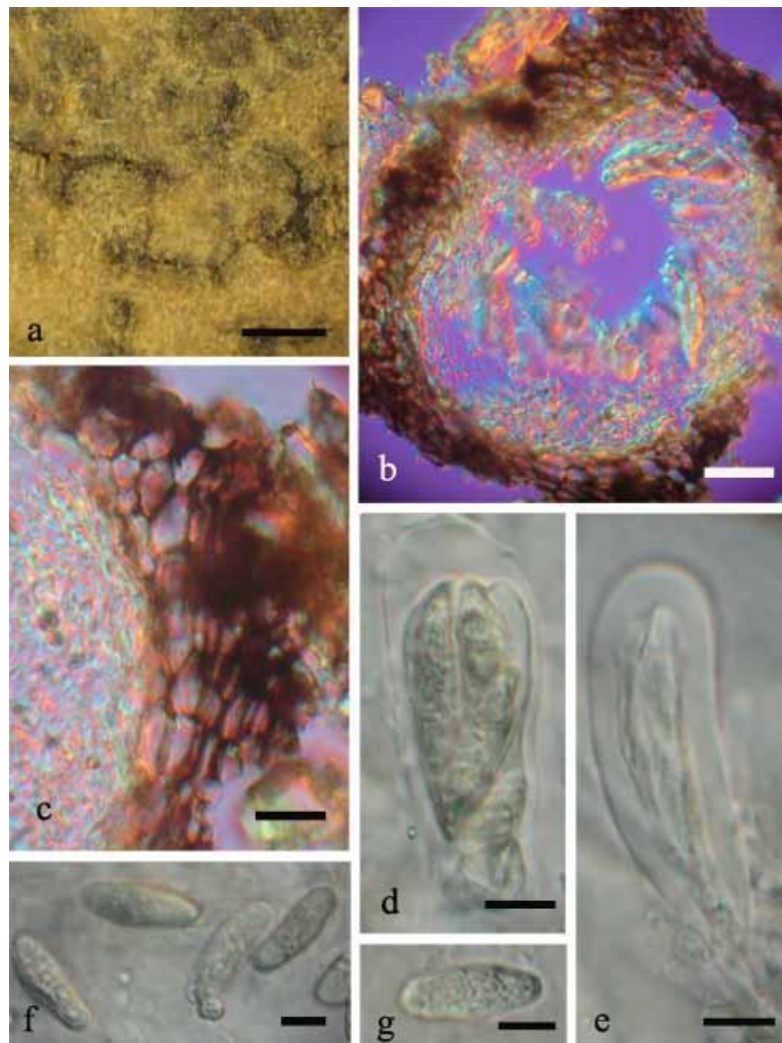
Botryosphaeria ribis Grossenbacher & Duggar, Technical Bulletin New York Agricultural Experiment Station 18: 128 (1911) (Fig. 3a-g)

= *Guignardia sophorae* Kantshaveli, Morbi plantarum 17: 84 (1928) MycoBank: 278408

Ascomata 125–200 μ m diam., 125–205 μ m high, on surface of the leaves, black, globose to subglobose, immersed to semi-immersed in plant tissues. *Peridium* 38–63 μ m wide, one strata of 2–4 layers of cells *textura angularis*, with thickened brown walls around ostiole. *Asci* 55–90 \times 13–23 μ m (\bar{x} = 71 \times 19 μ m, n = 20), 8-spored, bitunicate, cylindrical to cylindric-clavate, rounded at the apex where the diam. is 13–20 μ m, tapering gradually to a 8–23 \times 8–15 μ m long pedicel attached to the basal peridium. *Ascospores* 18–25 \times 5–10 μ m (\bar{x} = 21 \times 7 μ m, n = 20), uniseriate to biseriate, ellipsoidal, widest 2/5 near the apex (obtrullate), hyaline to greenish, 1-celled, coarse-guttulate, smooth-walled, without mucilaginous sheath at the ends.

Material examined – GEORGIA, Tiflis on stems of *Sophora japonica* (Fabaceae), 25 October 1936, Kantshaveli, V. L. Komarov Botanical Institute. Prof. Popov Street 2. Saint Petersburg 197376, Russia (LE 34626, from holotype of *Guignardia sophorae*).

Notes – Morphologically the specimen labeled as *Guignardia sophorae* is similar to *Botryosphaeria ribis* (Sivanesan 1984) and hence the transfer was done. The asexual state is *Fusicoccum ribis* (Macedo & Baretto 2008). Three genes sequenced (ITS, EF and β -tubulin) showed two distinct phylogenetic assemblages within two asexual morphs (*Fusicoccum* and *Diplodia*) (Slippers et al. 2004).



Figs 3a–g – *Botryosphaeria ribis* (LE 34626, from holotype of *Guignardia sophorae*). a, Ascomata on host surface. b, c Peridium comprising one strata of 2–3 cells *textura angularis* with thickened brown walls. d, Asci. e, Immature asci. f, g Ascospores. – Scale bars a = 200 μ m, b, c = 40 μ m, d, g = 10 μ m.

Botryosphaeria zeae (Stout) von Arx & E. Müller,
Beitr. Krypt.– fl. Schweiz 11: 40 (1954)

(Fig. 4a–i)

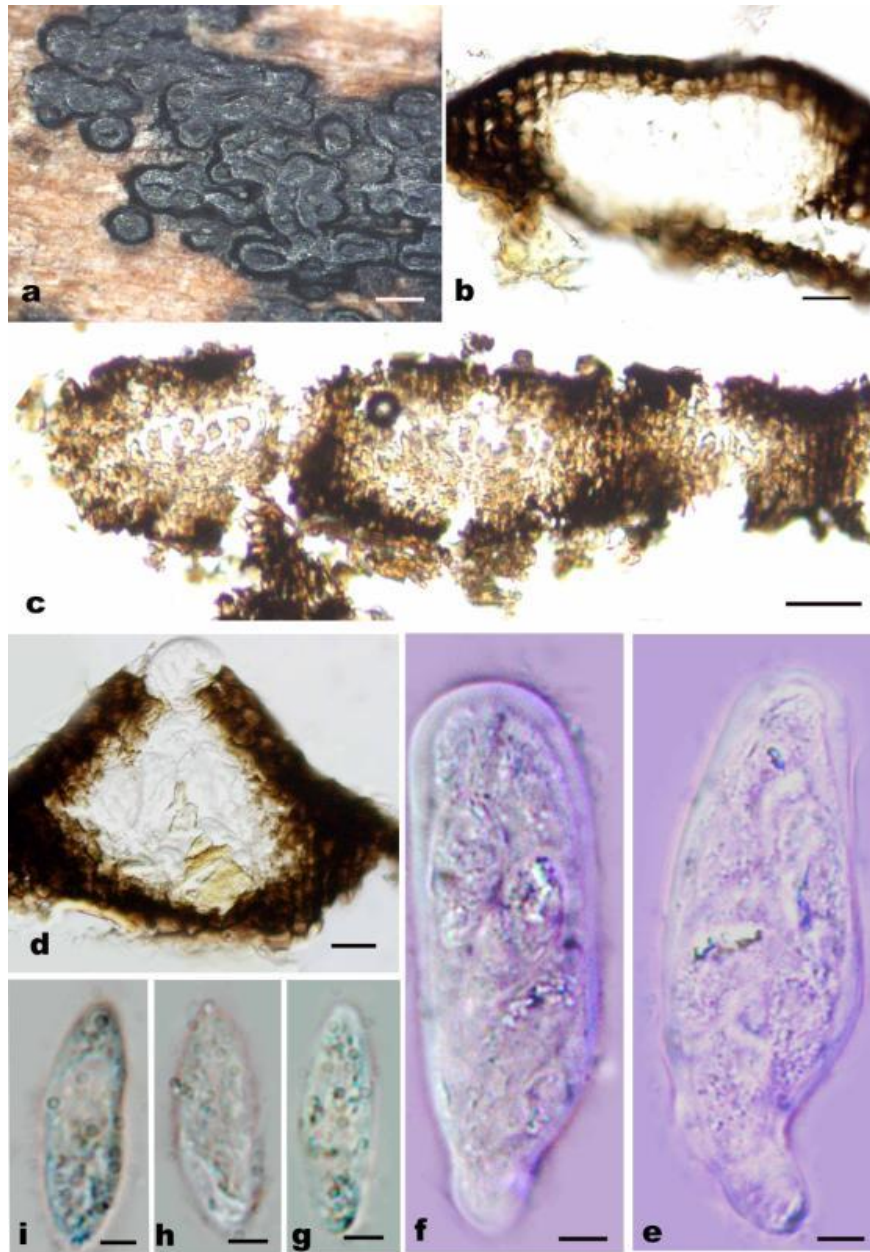
= *Guignardia haydenii* (Berk. & M.A. Curtis) Arx & E. Mull. (1954) MycoBank: MB 344112
≡ *Dothidea haydenii* Berk. & M.A. Curtis, Grevillea 4 (no. 31): 104 (1876)

Ascomata in groups and connected to each other, individually 28–80 μ m diam., 90–200 μ m high, black, globose to rectangular, immersed in plant tissue; in vertical section subglobose, with an indistinct ostiole. *Peridium* 13–67 μ m diam. in the upper region, 11–13 μ m in the base, comprising two strata of thickened black-walled cells *textura angularis*, with inner wall layer cells paler and vertical. *Asci* 41–66 \times 12–16 μ m, 6–8-spored, bitunicate, with ocular chamber, attached to the basal peridium, cylindrical to slightly clavate, rounded at the apex where diam. is 7–10 μ m, tapering gradually a to 15–26 \times 5–7 μ m short pedicel attached to the basal peridium. *Ascospores* 14–17 \times 4–

6 μm , biseriate, overlapping, ellipsoidal to cylindrical, slightly fusiform, hyaline, 1-celled, guttulate, smooth-walled, without a mucilaginous sheath.

Material examined – Near Fargo, N. Dak., on stems of *Aster paniculatus* (Asteraceae), 5 June 1915, Brenckle and Stevens, Fungi Dakotensis Brenckle (BPI 845200, from isotype of *Guignardia haydenii*).

Notes – Morphology of *Guignardia haydenii* is similar to *Botryosphaeria zae* (Sivanesan 1984) and therefore this transfer was done. So far, no molecular study has been done for this taxon.



Figs 4a–i – *Botryosphaeria zae* (BPI 845200, from isotype of *Guignardia haydenii*). a, Ascomata on host surface. b–d. Peridium comprising one strata of 2–4 cells of *textura angularis* with thickened brown walls. e, f Ascii. g–i. Ascospores. – Scale bars a = 100 μm , b, c = 100 μm , d = 40 μm , e, f = 10 μm , g–i = 10 μm .

Vestergrenia Rehm, Hedwigia 40: 100 (1901)

Vestergrenia atropurpurea (Chardon) Wulandari, **comb. nov.**

(Fig. 5a–g)

Index Fungorum: IF550639

= *Guignardia atropurpurea* Chardón, Mycologia 32(2): 177 (1940) MycoBank: MB 286749

Parasitic leaves with irregular leaf spots, with ascomata visible on the surface as numerous black dots. *Ascomata* 200–250 μm diam., 175–250 μm high, epiphyllous, black, pseudothecium, globose to subglobose, immersed in plant tissues, coriaceous, solitary to clustered, ostiolate, with ostioles as a black dots in the centre. *Peridium* 12.5–37.5 μm wide, comprising one strata comprising 2–3 layers of cells of *textura angularis* with thickened brown walls. *Pseudoparaphyses* not observed. *Asci* 74–154 \times 20–26 μm (\bar{x} = 118 \times 22 μm , n = 20), 8-spored, bitunicate, without a distinct ocular chamber subclavate to cylindrical, rounded at the apex where the diam. is 12–22 μm , tapering gradually to a 16–92 \times 4–6 μm long pedicel attached to the basal peridium. *Ascospores* 14–18 \times 6–10 μm (\bar{x} = 16 \times 8 μm , n = 20), biserial, ellipsoidal, hyaline to greenish, 1-celled, coarse-guttulate, smooth-walled, without a mucilaginous sheath.

Material examined – BRAZIL, Viçosa, on dead leaves of *Miconia* sp. (Melastomataceae), 4 January 1933, Fungus de Minas Geraes, Müller 443 (BPI 598138, from holotype of *Guignardia atropurpurea*).

Notes – With its carbonaceous, large ascomata and oblong ascospores, *Guignardia atropurpurea* is morphologically similar to *Vestergrenia* (Liu et al. 2012). However, this does not conform to other described species in the genus and therefore new combination is proposed.

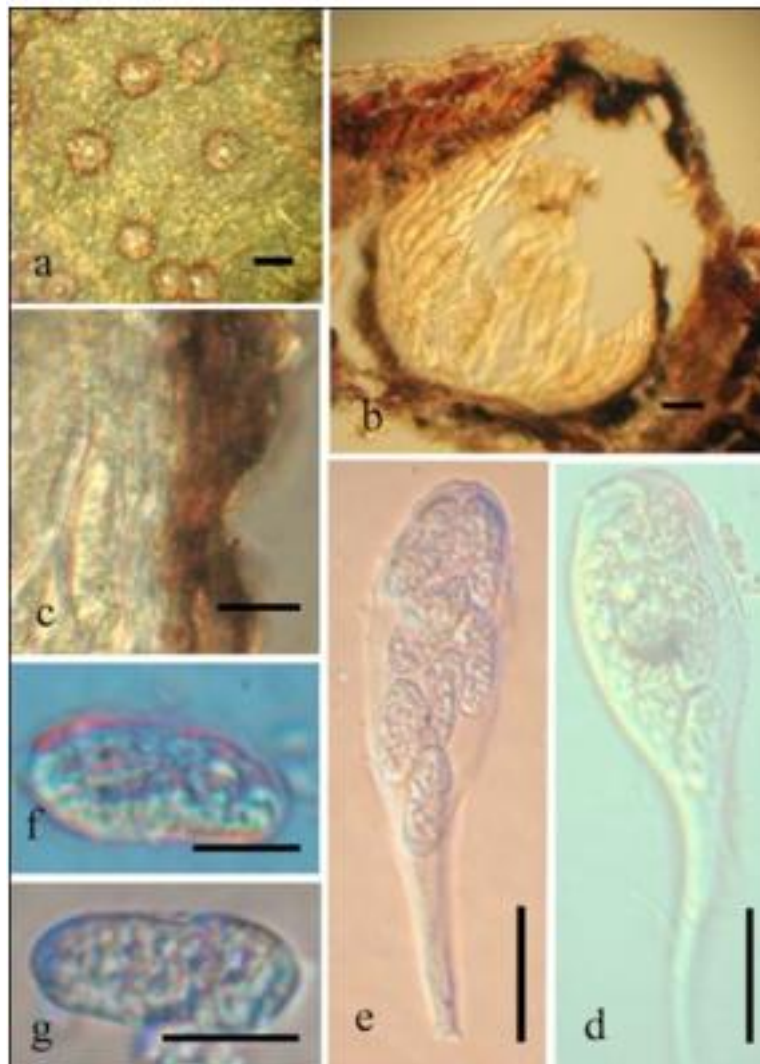


Fig. 5a–g – *Vestergrenia atropurpurea* (BPI 598138, from holotype of *Guignardia atropurpurea*) a. Ascomata on the host surface. b–c. Peridium comprising one strata comprising 2–3 layers of cells of *textura angularis* with thickened brown walls. d–e. Asci. f–g. Ascospores. Scale bars a = 200 μm , b–c = 15 μm , d–e = 26 μm , f–g = 10 μm .

Vestergrenia dinochloae (Rehm) Wulandari, **comb. nov.**

(Fig. 6a-g)

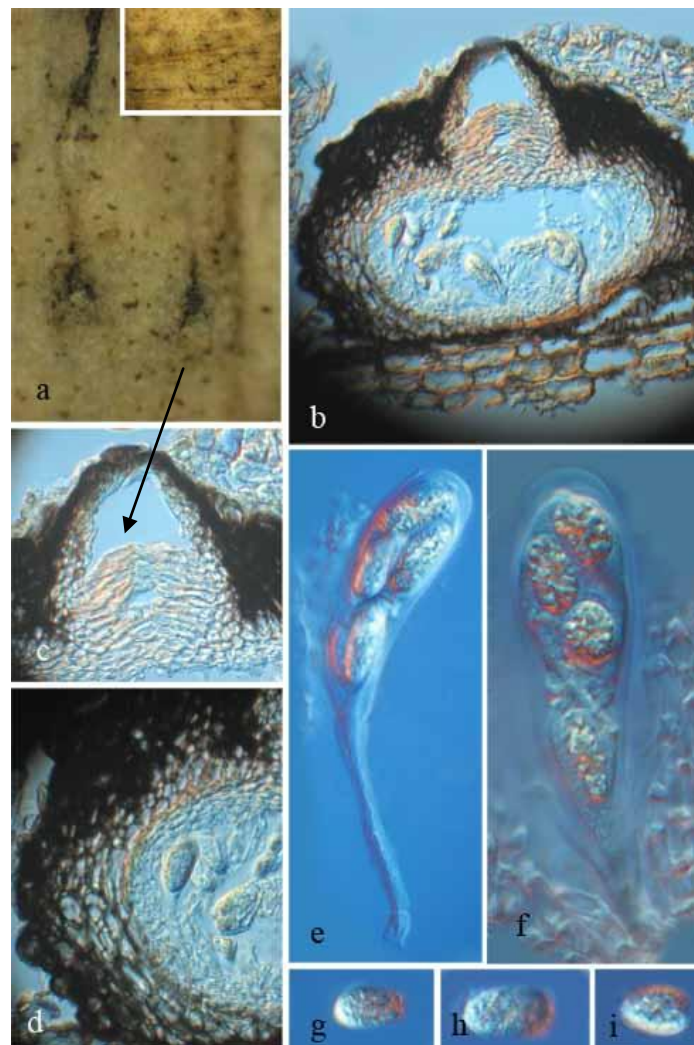
Index Fungorum: IF550640

= *Guignardia dinochloae* Rehm, Leafl. of Philipp. Bot. 8: 2936 (1916) Mycobank: MB 212586

Saprobic on leaf litter with irregular spots, with ascomata visible on leaf spots as black dots. *Ascomata* 200–250 μm diam., 190–200 μm high, pseudothecium, epiphyllous, black, globose to subglobose, immersed in plant tissues, coriaceous, solitary to clustered, ostiolate, with ostiole as a black dot in the centre. *Peridium* 35–40 μm wide, comprising one strata of 2–3 layers of cells *textura angularis* with thickened brown walls. *Pseudoparaphyses* not observed. *Asci* 60–110 \times 15–26 μm (\bar{x} = 90 \times 20 μm , n = 20), 8-spored, bitunicate, fissitunicate, pedicel attached to the basal peridium. *Ascospores* 14–18 \times 6–10 μm (\bar{x} = 16 \times 8 μm , n = 20), biserial, ellipsoidal, hyaline to greenish, 1-celled, coarse-guttulate, smooth-walled, without a mucilaginous sheath.

Material examined – PHILIPPINES, Mount Maquiling, near Los Banos province, Laguna, on *Dinochloa* sp. (Poaceae). December 1913, C.F. Baker (F 81683, from holotype of *Guignardia dinochloae*; F 81684; F 81684).

Notes – This specimen differs from other *Vestergrenia* by presence of periphyses on the ostiolar neck of ascomata. The ascomata is fully immersed in the host and not visible on the surface of the leaves as in other species of *Vestergrenia*.



Figs 6a–g – *Vestergrenia dinochloae* (F 81683, from holotype of *Guignardia dinochloae*) a, Ascomata on the host surface. b, d. Peridium comprising one strata of 2–3 layers of cells *textura angularis* with thickened brown walls. c, Ascomata neck with periphyses (arrow). d–f. Asci (fissitunicate). g, Ascospores. – Scale bars a = 200 μm , b, c = 50 μm , d, e = 10 μm , f = 26 μm , g = 10 μm .

Vestergrenia justiciae (F. Stevens) Petr., Anns mycol. 32(5/6): 407 (1934)
= *Guignardia justiciae* F. Stevens, Bot. Gaz. 69: 255 (1920) MycoBank: MB 208681

(Fig. 7a–g)

Ascomata 200–250 μm diam., 250–288 μm high, on the surface of the leaves, pseudothecium, black, globose to subglobose, semi-immersed in tanned plant tissues, hard, solitary, ostiolate, with ostioles as a black dots in the centre. *Peridium* 38–50 μm wide, comprising one strata of 2–3 layers of cells of *textura globularis* with thickened brown walls. *Pseudoparaphyses* not observed. *Asci* 73–125 \times 16–26 μm (\bar{x} = 92 \times 22 μm , n = 20), 8-spored, bitunicate, fissitunicate, with an ocular chamber 3–6 μm high, broadly cylindrical to cylindro-clavate, rounded at the apex where the diam. is 13–18 μm , tapering gradually to a 19–63 \times 4–5 μm long pedicel attached to the basal peridium. *Ascospores* 9–26 \times 6–13 μm (\bar{x} = 20 \times 9 μm , n = 20), overlapping biseriate, ovoid, diamond-shaped, hyaline to greenish, 1-celled, coarse-guttulate, smooth-walled, with a mucilaginous sheath on both ends.

Material examined – PUERTO RICO, Maricao, on leaves of *Justicia verticillaris* (Acanthaceae). 28 August 1913, F.L. Stevens, Private Herbarium F.L. Stevens No. 806, University Illinois Herbarum No. 2839 (ILL 9738, from holotype of *Guignardia justiciae*); PUERTO RICO, El Yungue, on the leaves of *Justicia verticillaris*, 16 July 1915, F. L. Stevens, University Illinois Herbarum No. 8557 (ILL9737, from paratype of *Guignardia justiciae*).

Notes – This species differs from other *Vestergrenia* species, by unique peridium with cells of *textura globularis* and diamond-shaped ascospores. In others, the cells of the peridium are *textura angularis* and ascospores ellipsoidal (Liu et al. 2012)

Vestergrenia tetrazygiae (Stevens) Wulandari, **comb. nov.**

(Fig. 8a–i)

Index Fungorum: IF550641

= *Guignardia tetrazygiae* F. Stevens, Bot. Gaz. 69: 255 (1920) MycoBank: MB 528760

Ascostromata 150–188 μm diam., 150–200 μm high, on upper and lower leaf surface, pseudothecium, black, globose to sub-globose, immersed in plant tissues. *Peridium* 38–53 μm wide, in one strata 1–2 layers of cells *textura angularis* with thickened brown angular walls. *Asci* 63–150 \times 25–38 μm (\bar{x} = 104 \times 31 μm , n = 10), 8-spored, bitunicate, cylindrical to cylindro-clavate, rounded at the apex where the diam. is 18–25 μm , tapering gradually to a 25–75 \times 3–8 μm long pedicel attached to the basal peridium. *Ascospores* 18–28 \times 10–13 μm (\bar{x} = 24 \times 12 μm , n = 20), biseriate, ellipsoidal, oblong, hyaline to greenish, 1-celled, coarse-guttulate, smooth-walled, without mucilaginous appendage at the ends.

Material examined – Puerto Rico, Vega Alga, on leaves of *Tetrazygia eleagnoidea* (Melastomataceae), Nov. 1913, F.L Stevens (BPI 844972, from holotype of *Guignardia tetrazygiae*).

Notes – With ascostromata growing on the veins of the leaves, asci with long pedicel, ellipsoidal to ovoid and guttulate ascospores with a thick perispore, *Guignardia tetrazygiae* is similar to *Vestergrenia* (Liu et al. 2012). However, its small-sized ascomata is unique and therefore the new combination is proposed.

Neodeightonia C. Booth, in Punithalingam, Mycol. Pap. 119: 17 (1970) [1969]

Neodeightonia palmicola J.K Liu, R. Phookamsak & K.D. Hyde., Sydowia 62(2):261–276 (2010)

(Fig. 9a–i)

= *Guignardia manokwaria* K.D. Hyde, Sydowia 47(2): 191 (1995) MycoBank: MB 413137

Ascomata developing under slightly darkened area, occasionally erumpent and cracking the host surface, mostly solitary, in vertical section ca 200 μm diam., 100 μm high, conical, immersed beneath the host cuticle with an erumpent apex, base flattened, with a thin spreading stroma at the periphery of the ascoma. *Peridium* up to 30 μm wide, thin below, composed of dark-brown-walled angular cells at the sides. At the periphery is a wedge of dark-brown angular cells, which extends as a thin line between adjacent ascomata. *Pseudoparaphyses* up to 4 μm diam., hypha-like,

filamentous, composed of short cylindrical cells, $8-10 \times 4 \mu\text{m}$ diam. *Asci* $70-100 \times 20-24 \mu\text{m}$, 8-spored, clavate, pedunculate, bitunicate, fissitunicate, apically rounded with an ocular chamber and faint ring. *Ascospores* $22-30 \times 8-12 \mu\text{m}$, 2–3-seriate, fusiform or fusiform-rhomboid, unicellular, hyaline, with apical button-like germ-pores and surrounded by a mucilaginous sheath with an irregular wavy outline.

Material examined – INDONESIA, Irian Jaya, Manokwari, on rachides of dead *Gelubia* sp., (Arecaceae) Mar. 1992, K.D. Hyde and N. Ragä (KDH 1206, from holotype of *Guignardia manokwaria*, BRIP 22749, phototype).

Notes – Similarities in morphology and molecular sequences data lead synonymising *Guignardia manokwaria* under *Neodeightonia palmicola* J.K Liu, R. Phookamsak and K.D. Hyde (Liu et al. 2011).

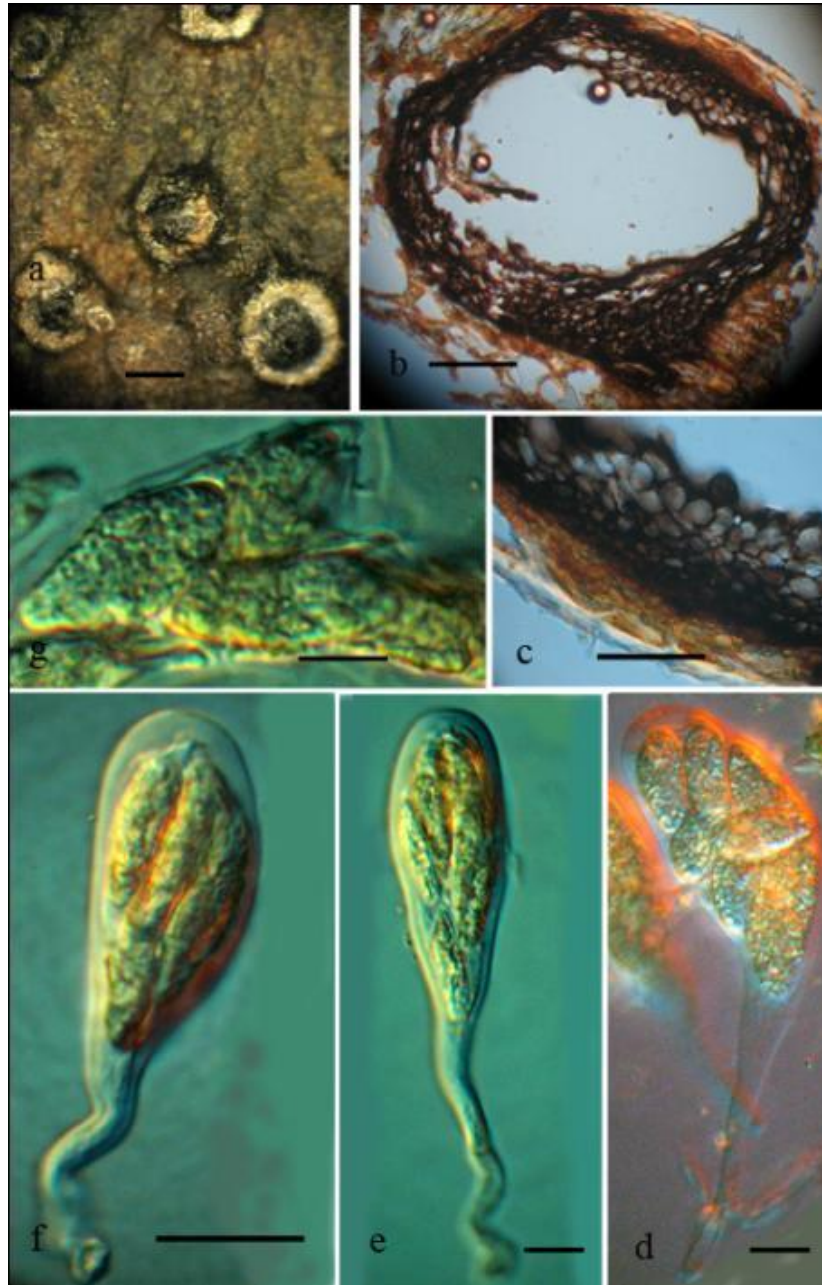
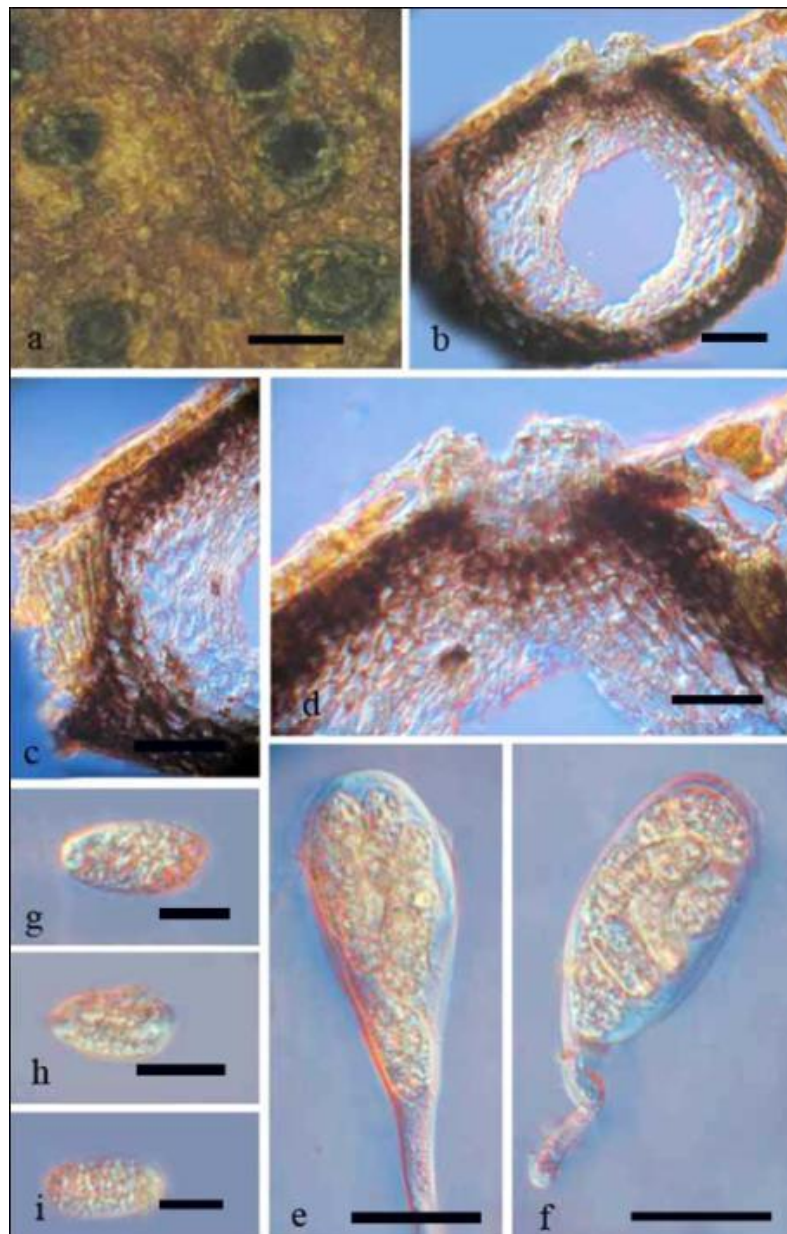


Fig. 7a–g – *Vestergrenia justiciae* (ILL 9738, from holotype of *Guignardia justiciae*) a, Ascomata on the host surface. b, c Peridium comprising one strata 2–3 layers of cells of *textura angularis* with thickened brown walls. d–f *Asci*. g, *Ascospores*. – Scale bars a = 200 μm , b, c = 50 μm , d, e = 10 μm , f = 26 μm , g = 10 μm .

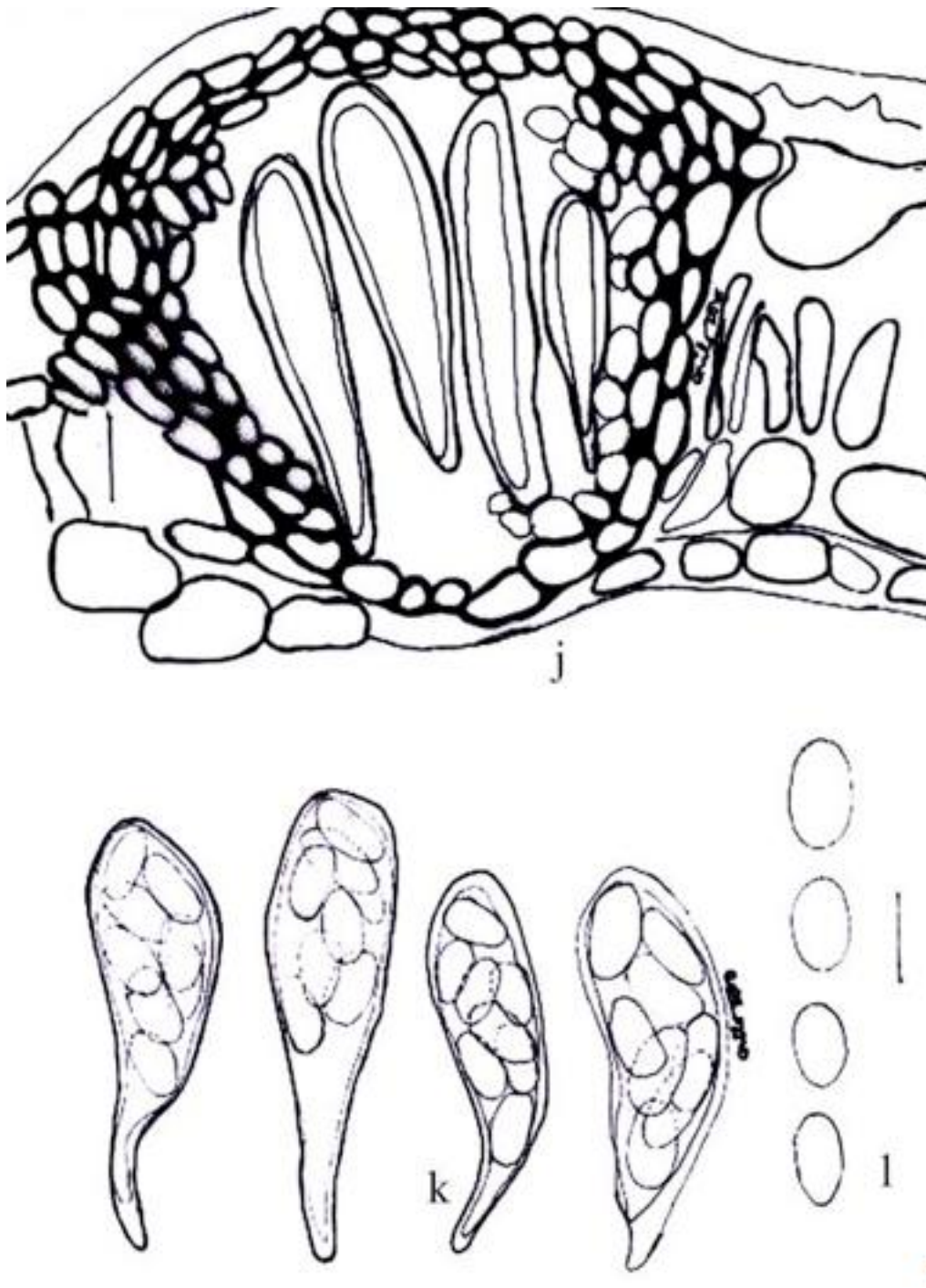
Hypocreales in Engler & Prantl, *Nat. Pflanzenfam.*, Teil. I (Leipzig) 1: 343 (1897)

Hyponectriaceae Petr. (1923), as a family has accommodated 22 genera with 15 synonyms and 128 species (Kirk et al. 2008). *Hyponectria* Sacc. (1978), a genus of Hyponectriaceae, is wide spread on dead leaves and other substrates, and consists of 16 species (Index Fungorum; Kirk et al. 2008). Index fungorum lists 49 species or epithets. The affinities of all these remains uncertain, pending further molecular analyses. *Physalospora* Niessl. and *Hyponectria* Sacc., are distinguished by the size of ascomata and ascospores. The ascomata in *Physalospora* is up to 400 µm diam. and ascospores range from 20 up to 30 µm, whereas in *Hyponectria* the ascomata is rarely up to 200 µm diam. and ascospores length rarely extend over 20 µm. Both *Physalospora* and *Hyponectria* react with chitinoid (J+ or and J-) (Barr 1977).

Hyponectriaceae Petr., *Annls mycol.* 21(3/4): 305 (1923)



Figs 8a-i – *Vestergrenia tetrazygiae* (BPI 844972, from holotype of *Guignardia tetrazygiae*). a, b Ascomata on host surface. c, d Peridium comprising 1–2 cells of *textura angularis* with thickened angular brown walls. e, f Asci. g, i Ascospores clavate viewed in any plane. Scale bars a = 200 µm, b-d = 40 µm, e-f = 30µm, g-i = 13µm.



Figs 8j–m – *Vestergrenia tetrazygiae* (BPI 844972, from holotype of *Guignardia tetrazygiae*) line drawing. j, Section of ascoma in the leaf. k, Asci. l, Ascospores. – Scale bars = 10 μ m.

Hyponectria Sacc., *Michelia* 1(no. 2): 250 (1878)

Hyponectria cf. *buxi* (DC) Sacc. *Michelia* 1(2): 250 (1878)

(Fig. 10a-h)

= *Guignardia rhamnii* Reusser *Phytopathologische Zeitschrift* 51: 235 (1959) MycoBank: MB 331548

= *Guignardia cirsii* Reusser *Phytopathologische Zeitschrift* 51: 235–236 (1964)

= *Guignardia loniceræ* Dearness & Barthelow *Mycologia* 18: 245 (1926)

= *Laestadia steppani* Petrak, *Annales Mycologicae* 18: 111 (1911)

= *Guignardia steppani* Petr. *Annales Mycologici* 32: 407 (1934)

Ascomata 70–140 μ m diam., 50–100 μ m high, on the surface of the leaf, perithecium, black, globose to sub-globose, immersed in plant tissues, coriaceous, solitary to clustered, ostiolate. *Ostioles* as black dots at the centre. *Peridium* 7–15 μ m wide, one strata of 2 layers of cells *textura*

angularis with thickened brown walls around ostiole. Paraphyses not observed. *Asci* 48–71 × 8–13 μm (\bar{x} = 57 × 9 μm, n = 10), 8-spored, unitunicate, cylindrical to cylindrical-clavate, rounded at the apex, where the diam. is 8–10 μm, tapering gradually to a 4–19 × 4–6 μm long pedicel attached to the basal peridium. *Ascospores* 11–14 × 3–5 μm (\bar{x} = 12 × 4 μm, n = 20), uniseriate or occasionally overlapping biseriate, falcate, fusiform, obovoid, ellipsoidal to oblong, hyaline, 1-celled, coarse-guttulate, smooth-walled.

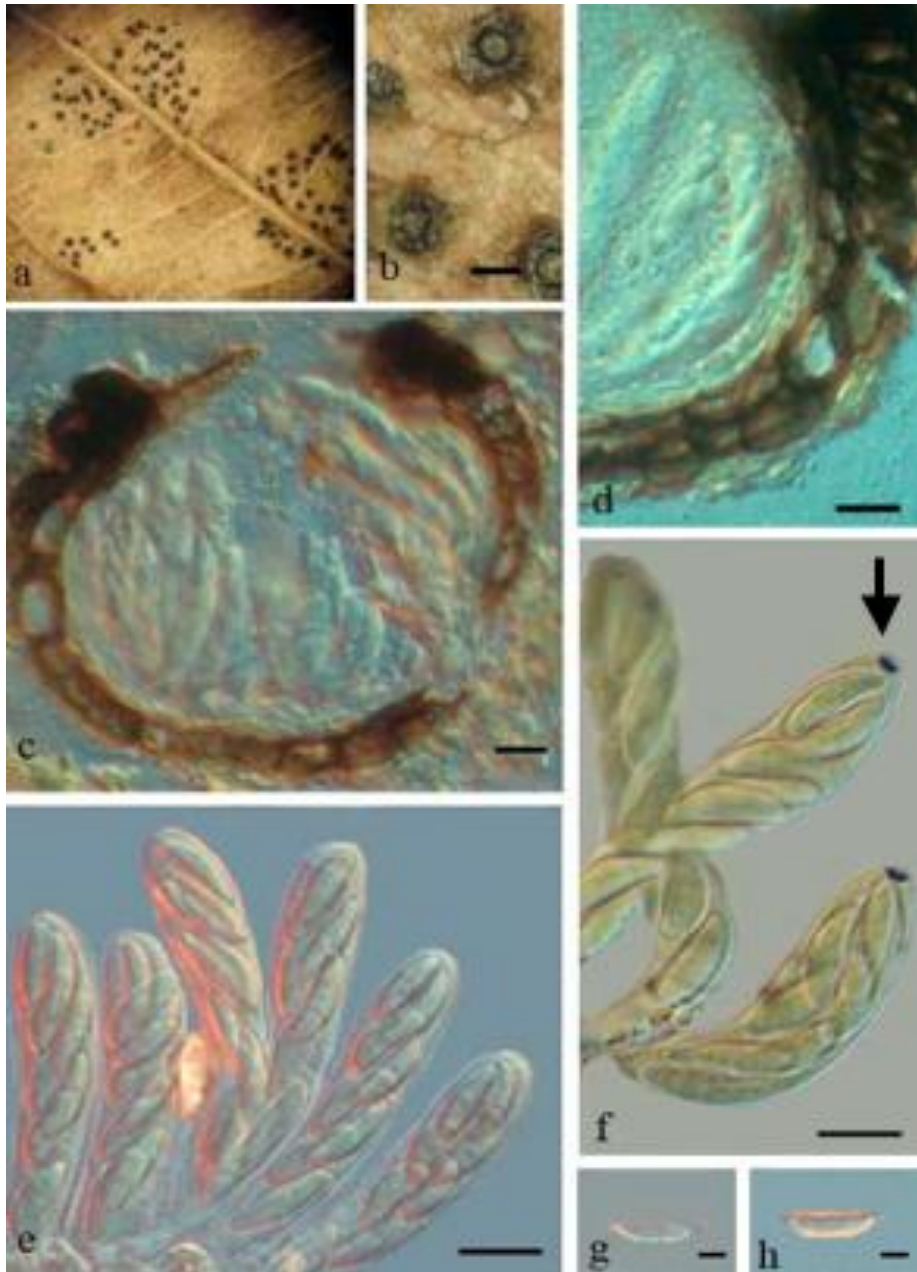
Material examined – SWITZERLAND, Von Vallon Betton, Massif de la Ste. Baume, var Frankreich on leaf of *Rhamnus alpina*, 3 June 1959, E. Müller, Botanische Sammlungen der Eidg. Technischen Hochschule Zürich Flora des Aletschreservats 2965, Zürich (ETH 2965, from holotype of *G. rhamni*), SWITZERLAND, Unterster Teil gegen batch, Aletschwäld, Kanton Wallis on leaf of *Cirsium spinosissimum*, 16 June 1963, E. Müller, Botanische Sammlungen der Eidg. Technischen Hochschule Zürich Flora des Aletschreservats no number, Zürich (ETH, from holotype of *G. cirsii*),



Figs 9a–k – *Neodeightonia palmicola* (KDH 1206, from holotype of *Guignardia manokwaria*) a, Ascomata on the host surface. b–d. Peridium comprising one strata of 2–3 layers of cells *textura angularis* with thickened brown walls. e, f. Asci. g–k. Ascospores (irregular wavy sheath, an arrowed). – Scale bars b = 100 μm, c, d = 30 μm, e, f = 25 μm, g–k = 12 μm.

USA, California, Alto Palo on leaf of *Lonicera hispidula*, 16 Mach 1918, E.T. Bartholow, New York Botanical Garden no number, New York (DAOM 5842, from holotype of *G. loniceræ*), CZECHOSLOVAKIA, Theusing, Bohemia, Bernkklau on leaf of *Solidago virgaurea*, June 1917, Steppan. R, Flora Bohemia and Moraviae Exsiccata No. 1232 (BPI 598475, from holotype of *G. steppani*).

Notes – With unitunicate asci and J⁺ sub-apical ring, *Guignardia cirsii* and *G. loniceræ* are similar to *Hyponectria* Sacc. All species of *Hyponectria* are J⁺ and J⁻. Rarely, the diam. of ascomata is more than 200 µm and ascospores more than 30 µm. There are only small differences between *Hyponectria* cf. *buxi* and the 4 species of *Guignardia* examined. The synopsis of the species is listed in table 1.



Figs 10a–h – *Hyponectria* cf. *buxi* (from holotype of *G. rhamnii*) a, Leaf spots on the leaves. b, Ascomata on the host surface. c, d. Peridium comprising one strata 2–3 layers of cells *textura angularis* with thickened brown walls and ostiole on the top. e, f. Asci, J⁺ sub-apical ring by Meltzer (arrowed). g, h. Ascospores. – Scale bars b = 100 µm, c, d = 15 µm, e, f = 10 µm, g, h = 5 µm.

Table 1 Synopsis of species of *Guignardia* synonymised under *Hyponectria cf buxi*

Host plants and Previous species name	Ascomata (μm); Peridium (μm)	Asci (μm); Apical Ring J- / J+	Ascospores (μm)
<i>Rhamnus alpina</i> (<i>G. rhamnii</i>)	70–140 \times 50–100; 7–15	48–71 \times 8–13; J+ (J plus)	11–14 \times 3–5
<i>Cirsium spinosissimum</i> (<i>G. cirsii</i>)	88–175 \times 88–175; 9–20	50–78 \times 8–15; J+ (J plus)	15–21 \times 5–6
<i>Lonicera hispidula</i> (<i>G. loniceriae</i>)	88–163 \times 100–163; 15–20	63–93 \times 13–17; J- (J minus)	13–19 \times 5–8
<i>Solidago virgaurea</i> (<i>G. steppani</i>)	100–125 \times 95–125; 15–25	44–61 \times 10–17; J- (J minus)	21–20 \times 5–10

Section 2: 290 Doubtful species (107 specimens found in poor condition and 183 unloaned specimens, apparently missing and with invalid name)

Several holotype specimens of *Phyllosticta* obtained from various herbaria were found in poor condition, meaning lack of ascomata contents, absence of asci, ascospores and hamathecium. In some material, it was too less and inadequate to put into microscopic studies. Some of those specimens with ready-to-observe slides of type in fact contained no fungal material. Where cultures maintained as type, in some, the mats were in depauperate condition. In other cases, the repositories responded with message that specimens are lost, invalid or missing. Some of those national herbaria such as the Indian and China refused to loan the materials. All these taxa are treated here as doubtful species and listed below in Table 2.

Besides citations, wherever available, synonymy is provided to the species listed in Table 2. Present status of the species is elaborated based on microscopic observations and relevant literature.

Table 2 Doubtful species in “*Guignardia*” (sexual state of *Phyllosticta*)

Name of fungus with authority, citation and synonymy	Herbaria /herbarium	Observation	Present status
1. <i>Guignardia abeana</i> W. Yamam. & K. Konno, Sci. rep. Hyogo Univ. Agric. 5(1): 9 (1961)	TNS, TFM, NBRC, Japan	Specimen missing	Illustration and description by original authors (Yamam. & Konno, 1961) indicate this as an ascomycete; its nature of asci not discernible.
2. <i>G. abietella-sibirica</i> (Schwarzman & Tartenova) Vasyag., in Vasyagina, Byzova & Tartenova, Flora Sporovykh Rastenii Kazakhstana [Cryptogamic Flora of Kazakhstan], 12, Sumchatye. Griby Lokuloaskomitsety (Loculoascomycetes) (Alma-Ata): 25 (1987)	LE, Russia	Specimen missing	Curator of herbarium informed specimen not available (Pers. comm.).
3. <i>G. acaciae</i> Hansf., Proc. Linn. Soc. N.S.W. 82: 14 (1957)	IMI, U.K	Examined	Specimen in poor condition; no details available.
4. <i>G. acerifera</i> (Cook) Lindau, (1897)	BPI, U.S.A	Examined	Specimen in poor condition; no details available.
5. <i>G. adeana</i> Rehm, Annls mycol. 10(6): 537 (1912)	F, U.S.A	Examined	Sexual state of <i>Colletotrichum</i> species (<i>Glomerella</i> species); (Fig. 11a-f).

6. <i>G. adianti</i> (Höhn.) Arx & E. Müll., Beitr. Kryptfl. Schweiz 11(no. 1): 60 (1954)	IMI, U.K	Examined	The specimen received from the herbarium was not the holotype.
7. <i>G. adriatica</i> Kirschst., Krypt.-Fl. Brandenburg (Leipzig) 7(3): 322 (1938)	B, Germany	Not examined	Specimen not received from herbarium in spite of repeated requests.
8. <i>G. aegyptiaca</i> (Müll. Arg.) Reichert, Bot. Jb. 56: 669 (1921)	G, Switzerland	Not examined	Curator informed the specimen has been loaned elsewhere.
9. <i>G. aesculi</i> (Peck) V.B. Stewart, Phytopathology 6: 9 (1916)	NY, U.S.A	Examined	The specimen received was not type material.
10. <i>G. agerati</i> Gonz. Frag. & Cif. 1928., Estac. Agron. de Moca, B 13: 8 (1928)	MA, Spain	Examined	Specimen in poor condition. Details not clear (Fig. 11 g-k).
11. <i>G. ahlesiana</i> (Hepp) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 345 (1930)	K, U.K	Not examined	Type specimen not available in K.
12. <i>G. ailanthes</i> (Grove) Sacc., Syll. fung. (Abellini) 24(2): 791 (1928)	PAD, Italy	Not examined	No communication available from the herbarium.
13. <i>G. alaskana</i> M. Reed, Harriman Alaska Expedition: 34 (1902)	BPI, U.S.A	Examined	Type seems to contain a lichen, <i>Mastodia tessalata</i> (Fig. 111-s)
14. <i>G. albicans</i> Rehm, Leafl. of Philipp. Bot. 6: 2258 (1914)	F, U.S.A	Examined	The specimen received was not holotype.
15. <i>G. alhagi</i> Bubák, Annl. K. K. naturh. Hofmus. Wien 28: 197 (1914)	BPI, U.S.A	Examined	The specimen received was not holotype.
16. <i>G. alliacea</i> Motohashi, Jun. Nishikawa & C. Nakash., Mycoscience 49: 15-16 (2008)	NBRC, Japan	Not examined	No communication available from the herbarium.
17. <i>G. alnea</i> (Fr.) J. Schröt. (1894) (Ref. Index herbarium)	NY, U.S.A	Examined	Specimen available; but without asci and ascospores. Treated as uncertain species.
18. <i>G. alnigena</i> Y. Nisik. & Watan., in Nogaku Kenkyu [Agricultural Research], Publ. Inst. Agric. Biol., Okayama Univ., 46: 208 (1959)	TNS, TFM, NBRC & YAM, Japan	Not examined	No communication available from the herbaria.
19. <i>G. alternantherae</i> (Sacc.) S. Hughes, Mycol. Pap. 48: 37 (1952)	PAD, Italy	Not examined	No communication available from the herbarium.
20. <i>G. alyxiae</i> F. Stevens, Bulletin of the Bernice P. Bishop Museum, Honolulu, Hawaii 19: 101 (1925)	BPI, U.S.A	Examined	Material received was not holotype.
21. <i>G. amomi</i> S.M. Lin & P.K. Chi, in Chi, [Fungal Diseases of Cultivated Medicinal Plants in Guangdong Province] (Guangdong): 43 (1994)	HMAS, China	Not examined	Repeated requests for holotype specimens remained unanswered.
22. <i>G. anthurii</i> Gutner, Acta Inst. Bot. Acad. Sci. USSR,	LE, Russia	Examined	Sexual state of

ser. II, fasc. 1: 288 (1933)			<i>Colletotrichum</i> species (<i>Glomerella</i> species).
23. <i>G. apiahyna</i> (Speg.) Sacc., Syll. fung. (Abellini) 24(2): 779 (1928)	LPS, Argentina	Examined	Specimen available; but without asci and ascospores. Treated as uncertain species.
24. <i>G. aphyllanthis</i> Unamuno (1942) (Ref. Index fungorum)	TNS, TFM, NBRC, Japan	Not examined	No communication received from herbaria.
25. <i>G. apocyni</i> (Ellis & Everh.) M.E. Barr, Mycotaxon 46: 70 (1993) = <i>G. apocyni</i> (Ellis & Everh.) Vasyag.	NY, U.S.A	Examined	Herbarium packet labeled as <i>Leptosphaeria</i> sp. Needs reexamination.
26. <i>G. araucariae</i> Sousa da Câmara (1920)	LISE, Portugal	Not examined	No communication received from herbarium.
27. <i>G. arachidis</i> Punith., Mycol. Pap. 136: 8 (1974)	IMI, U.K	Examined	Dry culture specimen had no fungal diagnostic features. Treated as 'uncertain' species.
28. <i>G. araliae</i> Gutner, Trudy Bot. Inst. Akad. Nauk SSSR, ser. 2, Sporov. Rast. 1: 289 (1933)	LE, Russia	Examined	Holotype specimen contained immature fruiting bodies and hence treated as 'uncertain' taxon.
29. <i>G. ardisiae</i> Miura ex I. Hino & Katum. (1967)	TNS, TFM, Japan	Not examined	No communication received from herbaria.
30. <i>G. ardisiicola</i> Motohashi, I. Araki & C. Nakash.	NBRC, Japan	Not examined	No communication received from herbarium.
31. <i>G. arecae</i> Sacc. (1917) (Ref. Index Fungorum)	PAD, Italy	Not examined	No communication received from herbarium.
32. <i>G. arengae</i> Rehm., Leafl. of. Philipp. Bot. 6: 2195 (1914)	F, U.S.A	Examined	Seems to be <i>Botryosphaeria</i> sp. (Fig. 11t-z ²). Needs recollection.
33. <i>G. asparagi</i> Gonz. Frag. & Cif. (1926)	MA, Spain	Not examined	The packaged received from MA without specimen.
34. <i>G. aspidiicola</i> Motohashi, I. Araki & C. Nakash., Mycoscience 49: 138-146 (2008)	NBRC, Japan	Not examined	No communication received from herbarium.
35. <i>G. astragali</i> Nasyrov (1965) (Ref. Index Fungorum)	LE, Russia	Not examined	No communication received from

36. <i>G. bambusae</i> I. Miyake & Hara, Bot. Mag., Tokyo 24: 238 (1910)	TNS, Japan	TFM,	Not examined	herbarium Treated as non. inval. (Invalid name). No communication received from herbaria.
37. <i>G. bambusella</i> Sacc., Notae Mycol. 23: 63 (1916)	PAD, Italy		Not examined	No communication received from herbarium.
38. <i>G. bambusina</i> Sacc., Atti Accad. Sci. Ven.-Trent.-Istr. 10: 63 (1917)	PAD, Italy		Not examined	No communication received from herbarium.
39. <i>G. bambusina</i> Rehm, Leafl. of Philipp. Bot. 8: 2936 (1916)	F, U.S.A		Examined	Unknown ascomycete species (Fig. 12a-g).
40. <i>G. banonsensis</i> (Petr.) Arx & E. Müll., Beitr. Kryptfl. Schweiz 11: 57 (1954)	W, Austria		Examined	Specimen received was not holotype.
41. <i>G. betulae</i> (Auersw.) Sacc. & Trotter, Syll. fung. (Abellini) 22: 77 (1913)	PAD, Italy		Not examined	No communication received from herbarium.
42. <i>G. bidwellii</i> (Ellis) Viala & Ravaz, Bull. Soc. mycol. Fr. 8: 63 (1892)	BPI, U.S.A		Examined	The specimen received was not holotype; herbarium packet labeled as <i>Sphaerella bidwellii</i> .
43. <i>G. bidwellii</i> f. <i>bidwellii</i> (Ellis) Viala & Ravaz, Bull. Soc. mycol. Fr. 8: 63 (1892)	BPI, U.S.A		Not examined	No communication received from herbarium.
44. <i>G. bidwellii</i> f. <i>parthenocissi</i> Luttr. (Ref. Index fungorum)	BPI, U.S.A		Not examined	No communication received from herbarium.
45. <i>G. bidwellii</i> var. <i>bidwellii</i> (Ellis) Viala & Ravaz (1892)	BPI, U.S.A		Not examined	No communication received from herbarium.
46. <i>G. biennis</i> (Dearn.) Sacc., Syll. fung. (Abellini) 24(2): 780 (1928)	DAOM, Canada		Examined	Unidentified coelomycete species (Fig. 12h-p).
47. <i>G. bispora</i> Wulandari & K.D. Hyde, Mycosphere 2(2): 115-128.	MFU, Thailand		Examined	Only type available; needs re-collection for sequencing.
48. <i>G. boltoniae</i> Dearn. & Barthol., Mycologia 18(5): 245 (1926)	DAOM, Canada		Examined	Uncertain species, <i>Botryosphaeria</i> -like (Fig. 12q-w).
49. <i>G. bulgarica</i> (Petr.) E. Mull., Revue Mycol., Paris 20: 4 (1955)	MA, Spain		Examined	This is an unknown bitunicate ascomycete
50. <i>G. buxi</i> (Fuckel) Lindau, Hilfsb. Sammelm Ascomyc. (Berlin): 21 (1938)	MA, Spain		Examined	The specimen received was not holotype.

51. <i>G. buxicola</i> Sousa da Câmara & Luz, Agron. lusit. 1: 44 (1939)	LISE, Portugal	Not examined	No communication received from herbarium.
52. <i>G. cabelludae</i> (Rangel) Sacc., Syll. fung. (Abellini) 24(2): 789 (1928)	RB (Brazil), PAD (Italy)	Not examined	No communication received from herbaria.
53. <i>G. cahirensis</i> (J. Steiner) Sacc., Syll. fung. (Abellini) 24(2): 786 (1928)	-	Not examined	No communication received from herbaria.
54. <i>G. calami</i> (Syd.) Arx & E. Müll., Beitr. Kryptfl. Schweiz 11(no. 1): 55 (1954)	BPI, U.S.A	Examined	The holotype contained limited asci and ascospores, which cannot clarify the identity.
55. <i>G. cambucae</i> (Rangel) Sacc., Syll. fung. (Abellini) 24(2): 789 (1928)	PAD, Italy	Not examined	No communication received from herbarium.
56. <i>G. camelliae</i> (Cooke) E.J. Butler ex Petch, Fungi of India: 62 (1923)	K, U.K	Not examined	No communication received from herbarium.
57. <i>G. canavaliae</i> Cif. & Gonz. Frag., Estac. Agron. de Moca, B 8: 19 (1927)	MA, Spain	Examined	Specimen was in poor condition and treated as uncertain species.
58. <i>G. capsici</i> Punith., Mycol. Pap. 136: 13 (1974)	IMI, U.K	Examined	Specimen was in poor condition and treated as uncertain species.
59. <i>G. caricae</i> (Marchal & Steyaert) Hendr., Publ. Inst. Natl. Agron. Congo Belge 35: 7 (1948)	BR, Belgium	Not examined	No communication received from herbarium.
60. <i>G. caricae</i> Sawada, Special Publication College of Agriculture, National Taiwan University 8: 57 (1959)	NTU, Taiwan	Examined	Specimen was in poor condition and treated as uncertain species.
61. <i>G. caricicola</i> (Fuckel) Vasyag., in Vasyagina, Byzova & Tartenova, Flora Sporovykh Rastenii Kazakhstana [Cryptogamic Flora of Kazakhstan], 12, Sumchatye. Griby Lokuloaskomitsety (Loculoascomycetes) (Alma-Ata): 26 (1987)	G, Switzerland	Not examined	No communication received from herbarium.
62. <i>G. caricis</i> Dearn. & House. New York State Museum Bulletin 266: 73 (1925)	DAOM, Canada	Examined	Seems to be <i>Mycosphaerella</i> -like taxon (Fig. 12x- z ⁸); needs recollection.
63. <i>G. carpinea</i> (Fr.) J. Schröt., in Cohn, Krypt.-Fl. Schlesien (Breslau) 3.2(3): 330 (1894) [1908]	NY, U.S.A	Not examined	No communication or specimen received from herbarium
64. <i>G. caryophyllea</i> (Cooke & Harkn.) Wehm., Sydowia 6(5-6): 420 (1952)	K, U.K	Not examined	No communication or specimen received from herbarium.
65. <i>G. cephalanthae</i> Sawada, [as 'cepharanthae'], Special Publication College of Agriculture, National Taiwan University 8: 58 (1959)	TNS, Japan TFM,	Not examined	No communication or specimen received

66. <i>G. cephalariae</i> (Auersw.) F. Stevens, Trans. Ill. St. Acad. Sci. 10: 184 (1917)	B, Germany	Examined	from herbaria. Specimen in poor condition.
67. <i>G. cephalariae</i> var. <i>alternantherae</i> (Sacc.) F. Stevens, Trans. Ill. St. Acad. Sci. 10: 184 (1917)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
68. <i>G. cephalariae</i> var. <i>cephalariae</i> (Auersw.) F. Stevens, Trans. Ill. St. Acad. Sci. 10: 184 (1917)	B, Germany	Not examined	No communication or specimen received from herbarium.
69. <i>G. cephalotaxi-nanae</i> Sawada, Bull. Gov. Forest Exp. Stn 46: 117 (1950)	TNS, NBRC and YAM, Japan	TFM, and Not examined	No communication or specimen received from herbaria.
70. <i>G. chandrapurensis</i> P. G. Sathe & K. M. Mogarkar, Marathwada University Journal of Science (Natural Science), B 16(9): 61 (1978) [1977]	AMH, India	Not examined	No communication or specimen received from herbarium.
71. <i>G. chondri</i> (H. L. Jones) Estee, Pubbl. Staz. Zool. Napoli 15: 378 (1936)	UC, U.S.A	Not examined	No communication or specimen received from herbarium.
72. <i>G. cinchonae</i> Vincens, Bull. Soc. Path. vég. Fr. 9: 131 (1922)	PC, France	Not examined	No communication or specimen received from herbarium.
73. <i>G. circumscissa</i> (Sacc.) Traverso, Fl. ital. crypt. 2: 381 (1906)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
74. <i>G. clusiae</i> F. Stevens, Trans. Ill. St. Acad. Sci. 10: 183 (1917)	ILL, U.S.A	Examined	Specimen contained an unknown ascomycete (Fig. 13a-g).
75. <i>G. cocoicola</i> Punith. Mycol. Pap. 136: 15 (1974)	IMI, U.K	Not Examined	No communication or specimen received from herbarium.
76. <i>G. coccoearpiae</i> (Pat.) Sacc. & Trotter, Syll. fung. (Abellini) 22: 76 (1913)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
77. <i>G. codiae</i> Thaug, Trans. Br. mycol. Soc. 66(1): 107 (1976)	IMI, U.K	Examined	Specimen in poor condition. This species is a <i>Phyllosticta</i> sp. (Thaug, 1976).
78. <i>G. coffeae</i> Punith. & B.S. Lee, in Punithalingam, Mycol. Pap. 149: 19 (1981)	IMI, U.K	Examined	Specimen in poor condition. This is a <i>Phyllosticta</i> (Punith. & Lee, 1981).
79. <i>G. coffeana</i> (F. Noack) Sawada, J. Taihoku Soc. Agric. 7(1): 23 (1943) [1942]	YAM, Japan	Not examined	No communication or specimen received from herbarium.
80. <i>G. coronillae</i> Sibilis, Annali Bot., Roma 18(2): 260 (1929)	BPI, U.S.A	Examined	Specimen in poor condition.
81. <i>G. creberrima</i> Syd. & P. Syd., Philipp. J. Sci., C, Bot. 8(5): 482 (1913)	DAR, Australia	Examined	Specimen in poor condition.
82. <i>G. convolvuli</i> Gonz. Frag. & Cif., Boln Real Soc.	PAV, Italy	Not	No

Españ. Hist. Nat., Biologica 25: 359 (1925)		examined	communication or specimen received from herbarium.
83. <i>G. cookeana</i> (Auersw.) Viala & Ravaz ex Feltgen, (1902)	B, Germany	Not examined	No communication or specimen received from herbarium.
84. <i>G. cooperta</i> (Desm.) Bubák, (1907)	B, Germany	Not examined	No communication or specimen received from herbarium
85. <i>G. corniculata</i> (Hoffm.) Keiřil., Anln naturh. Mus. Wien 39: 195 (1925)	MW, Russia	Not examined	No communication or specimen received from herbarium
86. <i>G. crepidis</i> E. Müll., Sydowia 1: 213 (1957)	ZT, Switzerland	Not examined	No communication or specimen received from herbarium.
87. <i>G. cryptomeriae</i> Sawada, Bull. Gov. Forest Exp. Stn 45: 48 (1950)	TNS, NBRC and YAM, Japan	TFM, and Not examined	No communication or specimen received from herbaria.
88. <i>G. cyperi</i> P.B. Chavan & Hosag., J. Econ. Taxon. Bot. 5(2): 447 (1984)	AMH, India	Not examined	No communication or specimen received from herbarium.
89. <i>G. cytisi</i> (Fuckel) von Arx & E. Müller, Phytopathologische Zeitschrift 51: 232–233 (1964)	KM, U.S.A	Examined	Contained <i>Pleospora</i> -like ascomycete (Fig. 13h-o).
90. <i>G. depressa</i> (Peck) Dearn. & House, (1925)	DAOM, Canada	Not examined	No communication or specimen received from herbarium.
91. <i>G. diapensiae</i> (Rehm) Arx & E. Müll., 11(1): 55 (1954)	F, U.S.A	Examined	Specimen in poor condition.
92. <i>G. dieffenbachiae</i> Gonz. Frag & Cif., Rep. Dominic. Est. Agron. Haina, Ser. B, Bot. Bull. 8: 21 (1927)	MA, Spain	Examined	Contained other ascomycete, possibly a secondary invader, <i>Mycropeltis</i> -like (Fig. 13p-u).
93. <i>G. dieffenbachiae</i> M.S. Ali & Saikia, Indian Phytopath. 50(2): 201 (1997)	IMI, U.K	Not examined	No communication or specimen received from herbarium.
94. <i>G. diffusa</i> (Crié) Sacc. & Trotter, Syll. fung. (Abellini) 22: 74 (1913)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
95. <i>G. dioscoreae</i> Sawada [as '(Averna-Sacca)], Special Publication College of Agriculture, National Taiwan University 8: 58 (1959)	YAM, Japan	Examined	Specimen contained a <i>Colletotrichum</i> species (Fig. 13v-z ²). Treated as invalid name (Index Fungorum).
96. <i>G. dioscoreae</i> Sawada ex Katum., J. Jap. Bot. 40: 193 (1965) (Ref. Index fungorum; MycoBank)	TNS, NBRC and YAM, Japan	TFM, and Not examined	No communication or specimen received

					from herbaria. Treated as nom. inval. (Invalid name) (Index fungorum).
97. <i>G. dioscoreae</i> A.K. Pande, Sydowia 22(5-6): 367 (1969) [1968]	AMH, India		Not Examined		No communication or specimen received from herbarium.
98. <i>G. dioscoreae-bulbiferae</i> A. Pande, Ascomycetes of Peninsular India (Jodhpur): 36 (2008) (Ref. Index Fungorum and MycoBank)	AMH, India		Not Examined		No communication or specimen received from herbarium. Treated as nom. inval. (Invalid name).
99. <i>G. dodartiae</i> Nasyrov ex Vasyag., in Vasyagina, Byzova & Tartenova, Flora Sporovykh Rastenii Kazakhstana [Cryptogamic Flora of Kazakhstan], 12, Sumchatye. Griby Lokuloaskomitsety (Loculoascomycetes) (Alma-Ata): 29 (1987)	LE, Russia		Not examined		No communication or specimen received from herbarium.
100. <i>G. dracaenae</i> Gutner, Acta Inst. bot. Komarov. Acad. Sci., Pl. Crypt, ser. 2 11(1): 296 (1933)	LE, Russia		Examined		Specimen in poor condition.
101. <i>G. durmitorensis</i> Bubák, Bot. Közl. 14(3-4): 55 (1915)	BPI, U.S.A		Not examined		No communication or specimen received from herbarium.
102. <i>G. dyerae</i> Punith. & P. H. Wong, in Punithalingam, Mycol. Pap. 149: 28 (1981)	IMI, U.K		Examined		Specimen in poor condition.
103. <i>G. echinophila</i> (Schwein.) Traverso, Fl. ital. crypt. 2: 390 (1907)	PH, NY, U.S.A		Not examined		No communication or specimen received from herbaria.
104. <i>G. ellipsoidea</i> Wulandari & K.D. Hyde, Mycosphere 2(2): 119 (2011)	MFU, Thailand		Examined		No type culture, need recollecting and sequencing.
105. <i>G. empetri</i> (Rostr.) Lar.N. Vassiljeva, Pirenomits. Lokuloaskomits. Severa Dal'nego Vostoka (Leningrad): 78 (1987)	C, Denmark		Not examined		No communication or specimen received from herbarium.
106. <i>G. epilobii</i> (Wallr.) Lindau, Mycologia 38(2): 152 (1946) (1946)	NY, U.S.A		Not examined		No communication or specimen received from herbarium.
107. <i>G. ericetorum</i> (Körb.) Rambold & Triebel = <i>Rhymocarpus ericetorum</i> (Körb.) Etayo, Diederich & Ertz, in Diederich, Ertz & Etayo, Lichenologist 42(3): 266 (2010)	L, The Netherlands		Not examined		No communication or specimen received from herbarium.
108. <i>G. eucrypta</i> Petr., Beitr. Kryptogamenfl. Schweiz, 11(172) (1954)	W, Austria		Examined		Specimen in poor condition.
109. <i>G. eugeniae</i> S.M. Lin & P.K. Chi, in Chi, [Fungal Diseases of Cultivated Medicinal Plants in Guangdong Province] (Guangdong): 62 (1994)	HMAS, China		Not examined		No communication or specimen received from herbarium.
110. <i>G. eupatorii</i> Punith., Mycol. Pap. 136: 21 (1974)	IMI, U.K		Examined		The ex-type was without asci and ascospores.
111. <i>G. euphorbiae</i> Rayss, Bull. rimmest. Soc. Mycol. Fr. 62: 20 (1946)	BUCM (Romania), (France)	PC	Not examined		No communication or specimen received from herbaria.
112. <i>G. euphorbiae</i> T. M. Achundov, : 5 (1971)	BPI, U.S.A		Not examined		No communication or

113. <i>G. euphorbiae-spinosae</i> Bubák, Bot. Közl. 14(3-4): 56 (1915)	BPI, U.S.A	Examined	specimen received from herbarium. Specimen in poor condition.
114. <i>G. excentrica</i> (Crié) Sacc. (Ref. Index Fungorum)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
115. <i>G. excentrica</i> var. <i>excentrica</i> (Crié) Sac.	PAD, Italy	Not examined	No communication or specimen received from herbarium.
116. <i>G. excentrica</i> var. <i>major</i> Bat., Publicões Inst. Micol. Recife 284: 9 (1960)	URM, Brazil	Not examined	No communication or specimen received from herbarium.
117. <i>G. fagi</i> H. J. Huds., Nova Hedwigia 10(3/4): 323 (1966) [1965]	IMI, U.K	Not examined	No communication or specimen received from herbarium.
118. <i>G. fatsiae</i> I. Hino & Katum., Apud Katumoto, J. Jap. Bot. 40: 194 (1965)	YAM, Japan	Examined	Found to be a <i>Colletotricum</i> species (Fig. 14a-w).
119. <i>G. fici</i> W. Y. Li & W. Y. Zhuang, Mycotaxon 100: 213 (2007)	HMAS, China	Not examined	No communication or specimen received from herbarium.
120. <i>G. fici-beecheyanae</i> Sawada, J. Toihaku. Soc. Agric. 7: 123 (1942)	YAM, Japan	Not examined	No communication or specimen received from herbarium.
121. <i>G. fici-septicae</i> Sawada in J. Taihoku Soc. Agric., 7:126 (1942)	NTU, Taiwan	Examined	Specimen was without asci and ascospores. Treated as uncertain species.
122. <i>G. fici-septicae</i> Sawada ex W.Y. Li & W.Y. Zhuang, in Li & Zhuang, Mycotaxon 100: 214 (2007)	HMAS, China	Not examined	No communication or specimen received from herbarium. Treated as nom. inval. (Invalid name. Art 36.1). (Index fungorum)
123. <i>G. fimbriata</i> sensu auct. brit.,	-	Not examined	Sensu auct brit.
124. <i>G. fimbriatae</i> (Vain.) Keissl., Rabenh. Krypt.-Fl. (Leipzig) 8: 346 (1930).	TUR, Finland	Examined	Specimen was without asci and ascospores; treated as uncertain species.
125. <i>G. flacourtae</i> Anahosur, Sydowia 24(1-6): 169 (1971)	IMI, U.K	Examined	Specimen in poor condition. This is a <i>Phyllosticta</i> .
126. <i>G. franconica</i> (Petr.) E. Müll., Sydowia 1: 213 (1957)	W, Austria	Examined	Specimen contained an ascomycete; but not <i>Phyllosticta</i> (Fig. 14f-m).
127. <i>G. freycinetia</i> Rehm, Philipp. J. Sci., C, Bot. 8(2): 184 (1913)	F, U.S.A	Examined	Specimen in poor condition; treated as uncertain

128. <i>G. fulvida</i> F.R. Sand., N.Z. Jl agric. Res. 8(1): 139 (1965)	PDD, Zealand	New	Examined	species. Specimen without asci and ascospores. Treated as uncertain species.
129. <i>G. fuscocinerea</i> Rehm, Leafl. of Philipp. Bot. 6: 2195 (1914)	F, U.S.A		Not examined	No communication or specimen received from herbaria.
130. <i>G. fuscocoriae</i> Rehm, Leafl. of Philipp. Bot. 6: 2195 (1914)	ILL, U.S.A		Examined	Specimen in poor condition; treated as an unknown coelomycete (Fig. 14n-q).
131. <i>G. galactina</i> Dearn. & Barth. New York State Museum Bulletin 179 (1915)	DAOM, Canada		Examined	This specimen is seems to be <i>Hyponectria</i> (Wang & K.D. Hyde 1999).
132. <i>G. gentianicola</i> (DC.) Arx & E. Müll., 11(1): 50 (1954)	G, Switzerland		Not examined	No communication or specimen received from herbarium.
133. <i>G. gloiopeltidis</i> Miyabe & Tokida, Bot. Mag., Tokyo 61: 118 (1948)	TNS, NBRC YAM, Japan	TFM, and	Not examined	Specimen referred as <i>Didymella gloiopeltidis</i> (Miyabe & Tokida) Kohlm. & E. Kohlm. (1979).
134. <i>G. glycyrrhizae</i> Antok., sec Petr. 1934, Annal. Mycol. 32: 339 (1934)	TNS, NBRC YAM, Japan	TFM, and	Not examined	No communication or specimen received from herbaria.
135. <i>G. gmelinae</i> Ts. Kobay., Trans. Mycol. Soc. Japan 21(3): 314 (1980)	TNS, NBRC YAM, Japan	TFM, and	Not examined	Repeated requests for holotype specimen to several herbaria, remained unanswered.
136. <i>G. graminea</i> Lobik, Materialy po floristicheskim i faunisticheskim obsledovaniyam Terskogo okruga [Data from investigations on the flora and fauna of the Ter region], 255 (1928)	TNS, NBRC YAM, Japan	TFM, and	Not examined	Repeated requests for holotype specimen to several herbaria remained unanswered.
137. <i>G. graminis</i> (Lind) M.E. Barr, 73: 12 (1959)	B, Germany		Not examined	No communication or specimen received from herbarium.
138. <i>G. harunganae</i> Sivan. & Okpala, Trans. Br. mycol. Soc. 72(3): 522 (1979)	IMI, U.K		Examined	Specimen in poor condition. This is now a <i>Phyllosticta</i> (Sivanesan & Okpala 1979).
139. <i>G. heliconiae</i> Gonz. Frag. et Cif., Boletin Real Soc. Espan. Hist. Nat. Madrid 27(325) 1928	MA, Spain		Examined	Specimen in poor condition.
140. <i>G. herbarum</i> Vasyag., in Vasyagina, Byzova & Tartenova, Flora Sporovykh Rastenii Kazakhstana [Cryptogamic Flora of Kazakhstan], 12, Sumchatye. Griby Lokuloaskomitsety (Loculoascomycetes) (Alma-Ata): 30 (1987)	AA (Kazakhztan), LISE (Portugal), LE (Russia)		Not examined	No communication or specimen received from herbaria.

141. <i>G. hernandiae</i> Tak. Kobay. & Kawabe, Japanese Journal of Tropical Agriculture 36(3): 201 (1992)	TNS, NBRC and YAM, Japan	TFM, and	Not examined	Repeated requests for holotype specimen to several herbaria remained unanswered.
142. <i>G. heterostemmae</i> (T. S. Ramakr. & K. Ramakr.) D. R. Pawar & J. N. Kapoor (1989)	AMH, India		Not examined	Repeated requests for holotype specimen to herbarium, remained unanswered.
143. <i>G. heterostemmatis</i> (T. S. Ramakr. & K. Ramakr.) D. R. Pawar & J. N. Kapoor (1989)	AMH, India		Not examined	Repeated requests for holotype specimen to herbarium, remained unanswered.
144. <i>G. heterotrichi</i> Stevens, Transaction of the Illinois Academy of Science 10: 182–183 (1917)	ILL, U.S.A		Examined	This specimen seems to be a <i>Hyphonectria</i> (Sivanesan & Shivas, 2002; Wang & Hyde, 1999).
145. <i>G. heveae</i> Gonz. Frag. & Cif., Boln Real Soc. Españ. Hist. Nat., Biologica 26: 492 (1926)	LPS (Argentina), PAV (Italy)		Not examined	No communication or specimen received from herbaria.
146. <i>G. heveae</i> Syd. & P. Syd., Anns mycol. 14(5): 360 (1916)	DAR, Australia		Examined	The species belong to <i>Phomopsis</i> (Fig. 14r-w).
147. <i>G. hibisci-sabdariffae</i> Sawada, Special Publication College of Agriculture, National Taiwan University 8: 59 (1959)	NTU, Taiwan		Not examined	No communication or specimen received from herbarium.
148. <i>G. himalayensis</i> E. Müll., Phytopath. Z. 34(4): 414 (1959)	ZT, Zwitterland		Examined	This is a <i>Kabatia</i> species (Fig. 15a-g) (Müller, 1959).
149. <i>G. hispanica</i> Bubák & Gonz. Frag., Hedwigia 57: 4 (1915)	BPI, U.S.A		Not examined	No communication or specimen received from herbaria.
150. <i>G. horaninovia</i> Nasyrov [as 'horaninowiae'], Griby Oazisov Vostochnoi Turkmenii (Ashkhabad): 300 (1965)	LE, Russia		Not examined	No communication or specimen received from herbarium.
151. <i>G. humulina</i> Bubák, Anns mycol. 4(2): 110 (1906)	BPI, U.S.A		Not examined	No communication or specimen received from herbarium.
152. <i>G. ilicis</i> (Jacz.) Schrantz, Bull. trimest. Soc. mycol. Fr. 76(4): 327 (1961)	P, France		Not examined	No communication or specimen received from herbarium.
153. <i>G. ilicis-formosanae</i> Sawada, Rep. Govt Res. Inst. Dep. Agric., Formosa 85: 30 (1943)	TNS, NBRC and YAM, Japan	TFM, and	Not examined	No communication or specimen received from herbaria.
154. <i>G. ingae</i> F. Stevens, Anns mycol. 28(5/6): 367 (1930)	ILL, U.S.A		Examined	The specimen was labeled as <i>Irenopsis ingae</i>

			(F. L. Stevens & Tenon) F. L. Stevens (Fig. 15h-o).
155. <i>G. insularis</i> sensu auct. brit.	-	Not examined	Sensu auct. brit.
156. <i>G. insularis</i> (A. Massal.) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 343 (1930)	VER, Italy	Not examined	No communication or specimen received from herbarium.
157. <i>G. irritans</i> Setch. & Estee, University of Calif. Publ. Bot. 4: 311 (1913)	BPI, U.S.A	Not examined	No communication or specimen received from herbarium.
158. <i>G. istriaca</i> Bubák, Annls mycol. 14(1/2): 12 (1916)	BPI, U.S.A	Not examined	No communication or specimen received from herbarium.
159. <i>G. istriaca</i> Kirschst., Annls mycol. 34(3): 187 (1936)	-	Not examined	No communication or specimen received from herbaria. Currently as nom. illegit. 53.1 (Index Fungorum).
160. <i>G. jasmini</i> (Petch) Sacc., Syll. fung. (Abellini) 24(2): 789 (1928)	K, U.K	Not examined	No communication or specimen received from herbaria.
161. <i>G. jasmnicola</i> Gonz. Frag., Intr. Flor. Microm. Catal, 83 (1917)	MA, Spain	Not examined	No communication or specimen received from herbarium.
162. <i>G. javanica</i> Koord., Atti Ist. bot. R. Univ. Pavia, 2 Sér. 13: 206 (1907)	BO, Indonesia	Not examined	Specimen not available (pers. comm. A. Rifai).
163. <i>G. juniperina</i> (Ellis) Rota-Rossi, Atti Ist. bot. R. Univ. Pavia, 2 Sér. 13: 206 (1907)	NY, U.S.A	Not examined	No communication or specimen received from herbarium.
164. <i>G. jussiaeae</i> F. Stevens, Bulletin of the Bernice P. Bishop Museum, Honolulu, Hawaii 19: 101 (1925)	ILL, U.S.A	Examined	This is an unknown unitunicate ascomycete (Fig. 15p-w).
165. <i>G. kareliniae</i> Nasyrov, Griby Oazisov Vostochnoï Turkmenii (Ashkhabad): 300 (1965)	LE, Russia	Not examined	No communication or specimen received from herbarium.
166. <i>G. laricina</i> Sawada, Report of the Department of Government Research Institute of Formosa 86: 10 (1943)	NTU, Taiwan	Examined	Specimen in poor condition.
167. <i>G. latemarensis</i> E. Müller Phytopathologische Zeitschr	ETH, Switzerland	Examined	This is seems to be a <i>Hyponectria</i> species (Wang & Hyde 1999).
168. <i>G. linderiae</i> Sawada, Report of the Department of Government Research Institute of Formosa 86: 10 (1943)	NTU, Taiwan	Examined	Specimen in poor condition.
169. <i>G. linderiae</i> Sawada ex. W. Y. Li & W. Y. Zhuang in I HMAS, China Mycotaxon 100: 216 (2007)		Not examined	No communication or specimen received from herbarium.
170. <i>G. lingue</i> (Speg.) Sacc. & Trotter, Syll. fung. (Abellini) 22: 74 (1913)	PAV, PAD, Italy	Not examined	No communication or

171. <i>G. lini</i> (Rostr.) Sacc & Trotter, Syll. fung. (Abellini) 22: 72 (1913)	C, Denmark	Examined	specimen received from herbaria. Specimen in poor condition.
172. <i>G. lonchocarpi</i> (Marchal & Steyaert) Hendr., Publ. Inst. Congo Belge 35: 7 (1948)	BR, Belgium	Not examined	No communication or specimen received from herbarium.
173. <i>G. lysimachiae</i> Jaap, Fung. Saxon. Exsicc., Pilze Sachsen's: no. 2262 (1914)	HBG, Germany	Examined	No communication or specimen received from herbarium.
174. <i>G. lunulata</i> (Rostr.) Larsen in Rosenvinge & Warming, in Botany of Iceland 2(3): 832, 9 (Fungi of Island) (1932)	C, Denmark	Examined	No communication or specimen received from herbarium.
175. <i>G. maculiformis</i> (Pers.) Mig., (1913)	NY, U.S.A	Not examined	No communication or specimen received from herbarium.
176. <i>G. magnolia</i> (Schwein.) J.H. Mill (1941), Mycologia 33 (1941)	PH, U.S.A	Examined	The specimen was in poor condition.
177. <i>G. mammeae</i> Cif. & Gonz. Frag., Boln de la Real Soc. Españ. Hist. Nat., Madrid 26: 193, fig. 1 (1926)	BPI, U.S.A	Examined	Specimen in poor condition.
178. <i>G. mangiferae</i> A. J. Roy, Indian Phytopath. 20(4): 348 (1968) [1967]	AMH, India	Examined	Specimen in poor condition.
179. <i>G. manihotis</i> var. <i>cajani</i> Sacc., Atti Soc. Veneto-Trent. Sci. Nat., Padova 23: 63 (1917)	BPI, U.S.A	Examined	Specimen in poor condition
180. <i>G. manihotis</i> var. <i>deminuta</i> Sacc., Nuovo G. bot. ital. 23(2): 200 (1916)	PAD, Italy	Not examined	No communication or specimen received from herbarium
181. <i>G. manihotis</i> var. <i>manihotis</i> Sacc. [as 'manihoti'], Annls mycol. 12(3): 304 (1914) (1914)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
182. <i>G. manihoticola</i> Sawada ex W.Y. Li & W.Y. Zhuang, in Li & Zhuang, Mycotaxon 100: 216 (2007)	HMAS, China	Not examined	No communication or specimen received from herbarium.
183. <i>G. manihoticola</i> Sawada, Special Publication College of Agriculture, National Taiwan University 8: 59 (19)	TNS, Japan	Examined	The specimen contained sexual state of <i>Colletotrichum</i> sp. (Fig. 15x-z ⁸).
184. <i>G. medinillae</i> (Rangel) Sacc., Syll. fung. (Abellini) 22: 75 (1913)	PAD (Italy), RB (Brazil)	Not examined	No communication or specimen received from herbaria.
185. <i>G. melanostigma</i> (Lév.) Sacc. & Trotter, Syll. fung. (Abellini) 22: 75 (1913)	PC, France	Not examined	No communication or specimen received from herbarium.
186. <i>G. mespilii</i> (Fautrey) Schrantz, in Bull. Soc. Mycol. Fr. 76 (4): 327 (1961)	NY, U.S.A	Not examined	No communication or specimen received from herbarium.
187. <i>G. miconiae</i> Seixas & R. W. Barreto, in Seixas, Barreto & Killgore, Mycologia 99(1): 103 (2007)	VIC, Brazil	Examined	Specimen in poor condition.
188. <i>G. microsticta</i> Sacc., Syll. fung. (Abellini) 22: 75 (1913)	PAD, Italy	Not examined	No communication or specimen received

189. <i>G. microthelia</i> (Wallr.) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 344 (1930)	STR, France	Not examined	from herbarium. No communication or specimen received from herbarium.
190. <i>G. migrans</i> (Rehm) K.D. Hyde, Sydowia 47(2): 192 (1995)	F, U.S.A	Examined	Specimen in poor condition.
191. <i>G. mildae</i> Treigienė, Mikol. Fitopatol. 40(5): 428 (2006)	MW, Russia	Not examined	No communication or specimen received from herbarium.
192. <i>G. millepunctata</i> (Desm.) Lind., Danish Fungi (Copenhagen): 201 (1913)	BR, Belgium	Not examined	No communication or specimen received from herbarium.
193. <i>G. minuta</i> Arx & Müll., Beitr. Kryptfl. Schweiz 11 (no. 1): 58 (1954)	W, Austria	Examined	This is an unknown ascomycete.
194. <i>G. mirabilis</i> E. Müll., Phytopath. Z. 34(4): 412 (1959)	ZT, Switzerland	Examined	This is a <i>Kabatia</i> species (Fig. 16a-g) (Müller 1959).
195. <i>G. miribelii</i> Aa, Persoonia 8(3): 283 (1975)	CBS, The Netherlands	Not examined	No communication or specimen received from herbarium. According to Aa & Vanev (2002) this is not <i>Phyllosticta</i> .
196. <i>G. moelleriana</i> Sousa da Câmara [as 'molleriana'], Bolm Soc. broteriana, Coimbra, sér. 1 25: 6 (1910)	LISE, Portugal	Not examined	No communication or specimen received from herbarium
197. <i>G. musae</i> Syd. & P. Syd., Anns mycol. 10(1): 80 (1912)	F, U.S.A	Examined	The specimen is in poor condition.
198. <i>G. musicola</i> Wulandari, L. Cai and K.D. Hyde, in Wulandari, To-anun, Cai, Abd-Elsalam & Hyde, Cryptog. Mycol. 31(4): 412 (2010)	MFU, Thailand	Examined	No ex-type culture, needs recollecting and sequencing.
199. <i>G. myopori</i> Sousa da Câmara, Agron. lusit. 10(4): 287 (1948)	LISE, Portugal	Not examined	No communication or specimen received from herbarium
200. <i>G. nectandrae</i> F. Stevens, Bot. Gaz. 69: 255 (1920)	ILL, U.S.A	Examined	<i>Dothidea</i> -like species (Fig. 16h-p)
201. <i>G. niesslii</i> (Kunze ex Rehm) Lindau, Syll. fung. (Abellir 1: 421 (1881)	BPI, U.S.A	Not examined	No communication or specimen received from herbarium.
202. <i>G. nilagirica</i> T. S. Ramakr. & K. Ramakr., Proc. Indian natn Sci. Acad., Part B. Biol. Sci. 28: 56 (1948)	AMH, India	Not examined	No communication or specimen received from herbarium.
203. <i>G. oleandrina</i> (Curzi & Barbaini) Arx & E. Müll., in Beitr. Kryptogamenfl. Schweiz 11: 174 (1954)	ZT Switzerland	Not examined	No communication or specimen received from herbarium.
204. <i>G. olivieri</i> (Vouaux) Sacc., Syll. fung. (Abellini) 24(2): 1 (1928)	NY (U.S.A)	Not examined	No communication or specimen received from herbarium.

205. <i>G. opuntiae</i> Petch, Ann. R. bot. Gdns Peradeniya 9: 317 (1925)	K, NY (U.S.A)	Not examined	No communication or specimen received from herbaria.
206. <i>G. oosperma</i> Kirschst., <i>Krypt.-Fl. Brandenburg</i> (Leipzig 7(3): 320 (1938)	B, Germany	Examined	Specimen in poor condition.
207. <i>G. oxyriæ</i> (Rostr.) P. Larsen. The Botany of Iceland II p 9: 484 (1932)	C, Denmark	Examined	Specimen contained an unknown ascomycete (Fig. 16q-v).
208. <i>G. paulowniæ</i> (S. Ito & Kobayasi) W. Yamam. & S. Ito Sci. Rep. Hyogo Univ. Agric. 5(1): 11 (1961)	TNS, NBRC and YAM, Japan	Not examined	No communication or specimen received from herbaria.
209. <i>G. pedrosensis</i> Bubák & Gonz. Frag., Hedwigia 57: 4 (1915)	C, Denmark	Not examined	No communication or specimen received from herbarium.
210. <i>G. pegani</i> (Rostr.) Sacc. & Trotter, Syll. fung. (Abellini) 22: 72 (1913)	C, Denmark	Examined	<i>Botryosphaeria</i> -like species (Fig. 16w-z ²)
211. <i>G. perpusilla</i> (Desm.) Verpl., Bull. Jard. bot. État Brux. 5: 340 (1939)	NY (U.S.A) and BR (Belgium)	Not examined	No communication or specimen received from herbaria.
212. <i>G. perseæ</i> Punith., Mycol. Pap. 136: 43 (1974)	IMI, U.K	Not examined	No communication or specimen received from herbarium.
213. <i>G. photiniæ</i> J. V. Almeida & Sousa da Câmara, Bolm Soc. broteriana, Coimbra, sér. 1 24: 11 (1909)	LISE, Portugal	Not examined	No communication or specimen received from herbarium.
214. <i>G. phytolaccae</i> J. V. Almeida & Sousa da Câmara, Bolm Soc. broteriana, Coimbra, sér. 1 24: 11 (1909)	LISE, Portugal	Not examined	No communication or specimen received from herbarium.
215. <i>G. pinastri</i> (DC.) Lindau, in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1): 423 (1897)	NY, U.S.A	Not examined	No communication or specimen received from herbarium.
216. <i>G. pini</i> Sivan., Trans. Br. mycol. Soc. 73(1): 169 (1979)	IMI, U.K	Examined	Specimen in poor condition.
217. <i>G. piperis</i> (Rehm) Arx & E. Müll., Beitr. Kryptfl. Schweiz 11(no. 1): 56 (1954).	F, U.S.A	Examined	Specimen in poor condition.
218. <i>G. plectroniæ</i> Syd. and P. Syd., Anns mycol. 15(3/4): 207 (1917)	F. U.S.A	Examined	This is a sexual state of <i>Colletotrichum</i> sp. (Fig. 17a-h).
219. <i>G. pleurothallis</i> Dearn. & House, Bull. N.Y. St. Mus. 266: 72 (1925)	DAOM, Canada	Not examined	No communication or specimen received from herbarium.
220. <i>G. podocarpi</i> Crous in Seifert & Castañeda Ruíz, S. Afr. J. Bot. 62(2): 90 (1996)	PREM, South Africa	Examined	Specimen in poor condition.
221. <i>G. polygonati</i> (Schwein.) Lindau, in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1): 423 (1897)	NY, U.S.A	Not examined	No communication or specimen received from herbarium.
222. <i>G. polygoni</i> Reusser, Phytopath. Z. 51: 236 (1964)	ETH, Ethiopia	Not examined	No communication or specimen received

223. <i>G. polygoni-chinensis</i> Sawada ex W.Y. Li & W.Y. Zhuang, in Li & Zhuang, Mycotaxon 100: 218 (2007)	HMAS, China	Not examined	from herbarium. No communication or specimen received from herbarium.
224. <i>G. polygoni-chinensis</i> Sawada, in J. Taihoku Soc. Agric 7:124 (1942)	NTU, Taiwan	Examined	Specimen in poor condition.
225. <i>G. populi</i> G. E. Thompson. Mycologia 46: 658 (1954)	BPI, U.S.A	Examined	This is a <i>Physalospora</i> sp. (Fig. 17i-s).
226. <i>G. poterii</i> (Petr.) E. Müll., in Sydowia, Beih. 1(Petrak-Festschrift): 213 (1957)	ZT, Zwitterland	Not examined	No communication or specimen received from herbarium.
227. <i>G. prasiolae</i> (G. Winter) Lemmerm., Naturwiss. Ver. Bremen 17: 199 (1901)	B, Germany	Not examined	No communication or specimen received from herbarium.
228. <i>G. prominens</i> Earle, Muhlenbergia 1: 15 (1901)	BPI, U.S.A	Examined	Specimen in poor condition.
229. <i>G. pruni-persicae</i> Sawada, Report of the Department of Agriculture, Government Research Institute of Formosa 85	NTU, Taiwan	Examined	Specimen in poor condition.
230. <i>G. psidii</i> Ullasa & Rawal, Curr. Sci. 53(8): 436 (1984)	CBS, The Netherlands	Not examined	No communication or specimen received from herbaria. This is <i>Phyllosticta capitalensis</i> (Glienke et al. 2011)
231. <i>G. psoromoides</i> (Borrer) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 346 (1930)	K, U.K	Not examined	No communication or specimen received from herbarium.
232. <i>G. puerariae</i> Sawada, Report of the Department of Agriculture, Government Research Institute of Formosa 86: 11 (1943)	TNS, TFM, NBRC and YAM, Japan	Not examined	No communication or specimen received from herbaria
233. <i>G. puiggarii</i> (Speg.) Sacc. [as 'puiggari'], Syll. fung. (Abellini) 24(2): 788 (1928)	LPS, Argentina	Not examined	No communication or specimen received from herbarium.
234. <i>G. pullulans</i> Kleb., Ber. dt. bot. Ges. 42: 69 (1924)	B, Germany	Not examined	No communication or specimen received from herbarium.
235. <i>G. punctiformis</i> Chardon, Mycologia 32: 178 (1940)	VIC, Brazil	Examined	Specimen in poor condition.
236. <i>G. punctoidea</i> (Cooke) J. Schröt, Pilzfl. Schlesiens 2: 329 (1894)	K, U.K	Examined	Specimen in poor condition.
237. <i>G. pyricola</i> (Nose) Yamam. [as 'piricola'], Sci. Rep. Hyogo Univ. Agric., Ser. Agr. Biol. 5(1): 11 (1961)	TNS, TFM, NBRC and YAM, Japan	Not examined	No communication or specimen received from herbaria.
238. <i>G. quercus-ilicis</i> Traverso, Fl. ital. crypt. 2: 390 (1907)	PAV, PAD, Italy	Not examined	No communication or specimen received from herbaria.
239. <i>G. ramulicola</i> (Pass.) M. Morelet, Ann. Soc. Sci. Nat. Arch. Toulon et du Var 21: 105 (1969)	PARMA, Italy	Not examined	No communication or specimen received from herbarium.

240. <i>G. rathenowiana</i> Kirschst., Krypt.-Fl. Brandenburg (Leipzig) 7(3): 322 (1938)	B, Germany	Not examined	No communication or specimen received from herbarium.
241. <i>G. reniformis</i> Prill. & Delacr., C. r. hebd. Séanc. Acad. Sci., Paris (1900)	B, Germany	Not examined	No communication or specimen received from herbarium.
242. <i>G. rhodomyrti</i> Sawada, in J. Taihoku Soc. Agric., 7:124 (1942)	NTU, Taiwan	Examined	Specimen in poor condition.
243. <i>G. rhodora</i> (Cooke) B.H. Davis, Mycologia 38(1): 48 (1946)	PC, France	Not examined	No communication or specimen received from herbarium.
244. <i>G. rhytismoides</i> (Bab.) Zahlbr., 7(nos 601-700): 618 (1931)	BPI, U.S.A	Not examined	No communication or specimen received from herbarium.
245. <i>G. robiniae</i> S. Ito & Kobayasi, Bull. Govt Forest Exp. Stn Meguro 108: 18 (1958)	TNS, NBRC and YAM, Japan	Not examined	No communication or specimen received from herbaria.
246. <i>G. rosae</i> (Auersw.) Petr., Annls mycol. 19(1/2): 110 (1921)	BPI, U.S.A	Examined	Specimen in poor condition
247. <i>G. rosaecola</i> Feltgen, (1903) (Ref. Index Fungorum)	MA, Spain	Examined	Specimen in poor condition
248. <i>G. rosicola</i> Feltgen (1903) (Ref. Index Fungorum)	-	Not examined	No communication or specimen received from herbaria
249. <i>G. rhytismophila</i> Rehm, Annls mycol. 4(1): 70 (1906)	F, U.S.A	Examined	This is a <i>Phyllochora</i> species (tarspot) (Fig. 17t-z ³)
250. <i>G. rhynchosporae</i> F. Stevens, Trans. Ill. St. Acad. Sci. 10: 162-218 (1917)	ILL, U.S.A	Examined	This is an unknown ascomycete (Fig. 17z ⁴ -z ¹⁰)
251. <i>G. ryukyuensis</i> I. Hino & Katum, In Bull. Fac. Agric. Yamaguti Univ., 16: 607 (1965).	YAM, Japan	Examined	Specimen in poor condition.
252. <i>G. rubi</i> Sawada, Report of the Department of Agriculture, Government Research Institute of Formosa 85: 31 (1943)	NTU, Taiwan	Examined	Specimen in poor condition.
253. <i>G. rugosa</i> T.S. Ramakr., Sriniv. & Sundaram, Proc. Indian Acad. Sci., Pl. Sci. 37(3): 85 (1953)	AMH, India and K, U.K	Not examined	No communication or specimen received from herbaria.
254. <i>G. salicis</i> (Fuckel) Syd. ex Kirschst., Annls mycol. 34(4/5): 318 (1936)	F, U.S.A	Examined	Specimen in poor condition.
255. <i>G. salicina</i> Hara (Ref. Index fungorum)	TNS, NBRC and YAM, Japan	Not examined	No communication or specimen received from herbaria.
256. <i>G. sansevieriae</i> Punith., Mycol. Pap. 136: 45 (1974)	IMI, U.K	Examined	Specimen in poor condition.
257. <i>G. sarcomphali</i> Gonz. Frag. & Cif., Rep. Dominic. Est. Agron. Haina, Ser. B, Bot. Bull. 8: 20, fig. 9 (1927)	MA, Spain	Not examined	No communication or specimen received from herbarium.
258. <i>G. sawadae</i> Tak. Kobay., in Kobayashi & Sasaki, Trans. Mycol. Soc. Japan 16: 234 (1975)	NBRC, TNS, TFM and YAM, Japan	Not examined	No communication or specimen received from herbaria.

259. <i>G. scabiosae</i> (Lambotte & Fautrey) Arx & E. Müll., Bei Kryptfl. Schweiz 11(no. 1): 53 (1954)	BPI, U.S.A	Examined	Specimen in poor condition.
260. <i>G. scirpicola</i> Grab., Bull. Soc. mycol. Fr. 33: 76 (1917)	B, Germany	Not examined	No communication or specimen received from herbarium.
261. <i>G. seriata</i> Bäumler, Verh. Ver. Nat., Heilk. Pressb., N.F. 23: 26 (1902)	MW, Russia	Not examined	No communication or specimen received from herbarium.
262. <i>G. serratullae</i> (Petr.) E. Müll., Sydowia Beih. 1: 213 (1957)	W, Austria	Examined	Specimen in poor condition
263. <i>G. sibirica</i> Lavrov, in Trud. Tomsk. Gos. Univ. Kuibysheva, Ser. Boil., 110(4): 46 (1951)	MW, Russia	Not examined	No communication or specimen received from herbarium.
264. <i>G. singularis</i> (Magnus) Arx & E. Müll., in Müller & von Arx, Beitr. Kryptfl. Schweiz 11(no. 2): 25 (1962)	ZT, Switzerland	Not examined	No communication or specimen received from herbarium
265. <i>G. smilacicola</i> Sawada, Special Publication College of Agriculture, National Taiwan University 8: 59: (1959)	TNS, Japan	Examined	This is a sexual state of <i>Colletotrichum</i> sp. (<i>Glomerella</i> sp.) (Fig. 18a-i). Currently invalid name (Index Fungorum).
266. <i>G. smilacicola</i> Sawada ex W.Y. Li & W.Y. Zhuang, in Li & Zhuang, Mycotaxon 100: 219 (2007)	HMAS, China	Not examined	No communication or specimen received from herbarium.
267. <i>G. sojiae</i> Sawada, Special Publication College of Agriculture, National Taiwan University 8: 60 (1959)	NTU, Taiwan	Examined	This is sexual state of <i>Colletotrichum</i> (<i>Glomerella</i> sp.) (Fig. 18j-p).
268. <i>G. spinicola</i> (Sacc.) Lindau, in Engler & Prantl, Nat. Pflanzenfam., Teil. I (Leipzig) 1(1): 423 (1897)	PAD, Italy	Examined	Specimen is not holotype.
269. <i>G. stromatica</i> (Fuckel) Petr., Annls mycol. 21(3/4): 269 (1923)	MA, Spain	Examined	Specimen is not holotype.
270. <i>G. sudetica</i> Petr. Annls mycol. 19(1/2): 104 (1921)	MA, Spain	Examined	This is an unknown bitunicate ascomycete (Fig. 18q-w).
271. <i>G. sydowiana</i> Trotter, in Saccardo, Syll. fung. (Abellini) 24(2): 788 (1928)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
272. <i>G. synedrellae</i> Syd., Ann. Mycol. 14: 360 (1916)	F, U.S.A	Examined	Specimen in poor condition.
273. <i>G. theae</i> (Racib.) G. E. Bernard, Bull. Dept. Agric. Indes Netherland 6: 26 (1907)	KRA, Poland	Examined	Specimen in poor condition.
274. <i>G. tilakii</i> R. Rao & S.B. Kale, Mycopath. Mycol. appl. 27(1-2): 114 (1965)	AMH, India	Not examined	No communication or specimen received from herbarium.
275. <i>G. tofieldiae</i> (Lambotte & Fautrey) Arx & E. Müll., Beitr. Kryptfl. Schweiz 11(1): 59 (1954)	SIENA, Italy	Examined	Poor condition of the specimen.
276. <i>G. traversoana</i> Gonz. Frag., Trab. Mus. Nac. Cienc. Nat., Ser. Bot.: 73 (1916)	MA, Spain	Examined	The specimen contained an unknown

277. <i>G. trichosanthis</i> Katsuki, J. Jap. Bot. 31(12): 370 (1956)	NBRC, TFM, TNS and YAM.	Not examined	ascomycete. No communication or specimen received from herbaria.
278. <i>G. tumefaciens</i> Cribb, Pap. Dept. Bot. (formerly Biol.) 1 (1954)	BRIP, Australia	Not examined	No communication or specimen received from herbarium.
279. <i>G. tunetana</i> (Pat.) Sacc., Syll. fung. (Abellini) 24(2): 79 (1928)	PH, U.S.A	Examined	The specimen contained a <i>Pleospora</i> species.
280. <i>G. ulmariae</i> Miura, Petr. List. Suppl.: 160 (1928)	TNS, Japan TFM,	Not examined	No communication or specimen received from herbaria.
281. <i>G. ulvae</i> M. Reed, University of Calif. Publ. Bot. 1: 160 (1902)	PAD, Italy	Not examined	No communication or specimen received from herbarium.
282. <i>G. umbelliferarum</i> (Rabenh.) Petr., Annls mycol. 19(1/2): 106 (1921)	B (Germany), K (U.K)	Not examined	No communication or specimen received from herbaria.
283. <i>G. veneta</i> (Sacc. & Speg.) Traverso, Fl. Ital. Crypt. 2:392 (1906)	PAV, Italy	Examined	Specimen in poor condition.
284. <i>G. valesiaca</i> Arx & Müll., Beitr. Kryptfl. Schweiz 11(no. 1): 58 (1954)	W, Austria	Not Examined	No communication or specimen received from herbarium.
285. <i>G. veronicae</i> (Rostr.) P. Larsen in Rosenvinge & Warming, in Botany of Iceland 2(3): 832, 9 (Fungi of Island) (1932)	C, Denmark	Examined	Specimen in poor condition.
286. <i>G. verrucicola</i> (Wedd.) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 341 (1930)	PC, France	Not examined	No communication or specimen received from herbarium.
287. <i>G. verrucicola</i> f. <i>olivieri</i> (Vouaux) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 342 (1930)	K (U.K), PC (France), W (Austria)	Not examined	No communication or specimen received from herbaria.
288. <i>G. verrucicola</i> f. <i>verrucicola</i> (Wedd.) Keissl., Rabenh. Krypt.-Fl., Edn 2 (Leipzig) 8: 341 (1930)	PC, France	Not examined	No communication or specimen received from herbarium.
289. <i>G. xanthosomatis</i> Cif. & Gonz. Frag., Boln de la Real Soc. Españ. Hist. Nat., Madrid 26: 493 (1926)	BPI, U.S.A	Examined	Specimen in poor condition.
290. <i>G. xylostei</i> Reusser, Phytopathologische Zeitschrift 51: 223 (1964)	ETH, Switzerland	Examined	The specimen contained a <i>Venturia</i> -like species (Fig. 18x-z ⁵).

Abbreviation: **AA:** Herbarium Institute of Botany and Phytointroduction, Ministry of Science, Academy of Sciences, 44 Temirajzev Street, Alma-Ata 480070, Kazakhstan; **AMH:** Herbarium, Mycology and Plant Pathology Department, Plant Sciences Division, Agharkar Research Institute, G. G. Agarkar Road, Pune 411 004, Maharashtra, India; **B:** Botanischer Garten und Botanisches Museum, Berlin, Germany; **BISH:** Bernice P. Bishop Museum, Honolulu, Hawaii; **BM:** Herbarium Department of Botany, The Natural History Museum, England U.K; **BO:** Herbarium Bogoriense, Cibinong, Indonesia, **BPI:** US National Fungus Collection (Beltsville, Md, USA); **BR:** Jardin botanique nationale national de Belgique, Belgium; **BRIP:** Plant Pathology Herbarium. Department of Primary Industries, Queensland. Australia; **BUCM:** Mycology Herbarium, Centre of Ecology, Taxonomy and Nature Conservation, Institute of Biology Bucharest, Romanian Academy, 296 Splaiul Independentei, P.O. Box 56-53, 060031 Bucuresti, Romania; **C:** Natural

History Museum of Denmark, Denmark, Copenhagen; **CBS**: CBS-KNAW Fungal Biodiversity Centre, Uppsalalaan 8, 3584 CT, Utrecht, The Netherlands; **DAOM**: National Mycological Herbarium, Biosystematics Research Institute, Canada Agriculture, Central Experimental Farm, Ottawa, Ontario, Canada; **DAR**: New South Wales department of Agriculture, Australia; **ETH**: National Herbarium. Biology department. Science Faculty. Addis Ababa. Ethiopia; **F**: Herbarium Botany Department, Field Museum of Natural History, 1400 South Lake Shore Drive Chicago, Illinois 60605-2496, U.S.A.; **FH**: Farlow Herbarium and reference library, Harvard University of Massachusetts, U.S.A.; **G**: Conservatoire et Jardin Botanique, Switzerland; **HBG**: Herbarium Biozentrum Klein-Flottbek, Ohnhorststrasse 18, D-22609 Hamburg, Germany; **HMAS**: Chinese Academy of Sciences, Beijing, China; **ILL**: Department of Botany, University of Illinois, Urbana, Illinois, U.S.A.; **IMI**: Commonwealth Mycological Institute, Surrey, England; **K**: Royal Botanic Garden Herbarium, Kew, U.K.; **L**: National Herbarium of the Netherlands, Leiden; **KM**: Herbarium Krkonošské museum, Správa Krkonošského národního parku, Dobrovského 3543 11 Vrchlabí, Czech Republic; **KRA**: Herbarium Institute of Botany, Jagiellonian University 31 Kopernika Street, PL-31-502 Kraków, Poland; **LE**: Herbarium Russian Academy of Sciences, V. L. Komarov Botanical Institute, Prof. Popov Street 2, Saint Petersburg 197376, Russia; **LISE**: Herbário Fitosistemática e Geobotânica, Estação Agronómica Nacional, Portugal; **LPS**: Instituto de Botánica C. Spegazzini, La Plata, Argentina; **MA**: Herbario Real Jardín Botánico, Plaza de Murillo 2, 28014 Madrid, Spain; **MFU**: Mae Fah Luang Herbarium, Chiang Rai, Thailand; **MW**: Herbarium Biological Faculty, Moscow State University, Vorobjovy Gory, Moscow 119991, Russia; **NBRC**: Culture Collection Division, NITE Biological Resource Center, National Institute of Technology and Evaluation, 2-5-8 Kazusakamatari, Kisarazu-shi, Chiba 292-0818, Japan; **NTU**: The Herbarium of National Taiwan University, Taiwan; **P**: Herbar National de Paris, Département de Systématique et Evolution, Phanérogamie, Muséum National d'Histoire Naturelle, 16 rue Buffon, F-75005 Paris, France; **PAD**: Università degli Studi di Padova, Italy; **PAV**: Erbario Dipartimento de Ecologia del Territorio, Università di Pavia, Via S. Epifanio 14, I-27100 Pavia, Italy; **PARMA**: Erbario Istituto ed Orto Botanico, Università degli Studi di Parma, Via Farini 90I-43100 Parma, Italy; **PC**: VHerbier Cryptogamique, Dépt. Systématique et Évolution, Muséum National d'Histoire Naturelle, France; **PDD**: New Zealand Fungal Herbarium, Landcare Research, Auckland, New Zealand; **PREM**: National Collection of Fungi of the Republic of South Africa (Pretoria, South Africa); **RB**: Herbário Instituto de Pesquisas, Jardim Botânico do Rio de Janeiro, 22460-030 Rio de Janeiro, Rio de Janeiro Brazil; **S**: Herbarium Swedish Museum of Natural History, P.O. Box 50007, Svante Arrhenius väg 7, S-104 05 Stockholm, Sweden; **SIENA**: Herbarium Universitatis Senensis, Dipartimento di Scienze Ambientali "G. Sarfatti", Sezione Museo Botanico, Università di Siena, Via Pier Andrea Mattioli 4, 53100 Siena, Italy; **STR**: Herbarium Institut de Botanique, 28 rue Goethe, F-67083 Strasbourg Cedex, France; **TNS**: Herbarium Department of Botany. National Museum of Nature and Science, Tsukuba, Japan; **TFM**: Forestry and Forest Products Research Institute, Japan; **UC**: University Herbarium, University of California, 1001 Valley Life Sciences Building #2465, Berkeley, California 94720-2465, U.S.A.; **URM**: Herbário Departamento de Micologia, Centro de Ciências Biológicas, Universidade Federal de Pernambuco 50670-420 Recife, Pernambuco, Brazil; **VER**: Erbario Sezione di Botanica, Museo Civico di Storia Naturale, Corso Cavour 11, I-37121 Verona, Italy; **YAM**: Herbarium Plant Pathology Department. Faculty of Agriculture. Yamaguchi University. Yamaguchi-shi, Yamaguchi, Japan; **VIC**: Herbário Departamento de Biologia Vegetal Universidade Federal de Viçosa, Brazil; **W**: Naturhistorisches Museum, Wien (Vienna, Austria); **YAM**: Herbarium Plant Pathology, Faculty of Agriculture, Yamaguchi University, Japan; **ZT**: University of Zurich & ETH Herbarium of Switzerland.

Discussion

A large number of species have been described in the genus *Guignardia* that has its asexual morph in *Phyllosticta*. An effort was made to re-visit the genus *Guignardia* by obtaining on loan and examining the type material of the species deposited in various herbaria. In this paper, of the reviewed 304 species, in Section I, fourteen species are transferred away from *Guignardia* and grouped in two other families (Botryosphaeriaceae and Hyponectriaceae) and four genera (*Botryosphaeriaceae*, *Vestergrenia*, *Neodeightonia*, *Hyponectria*). In section II, 107 treated as doubtful; identity of 183 species specimens could not be confirmed with certainty in view of non-receipt of holotypes from the herbaria where these are originally deposited and poor condition of those received specimens (Table 2).

Though we did not get specimens for 183 species, interesting responses were received from the herbaria world around. A few reasonings are considered here.

1. Some specimens are untraceable or missing in the herbaria because of destructions during World War II, such as B.
2. A few packets received were without the appropriate fungal type materials, as in the case of MA.
3. Some specimens were loaned elsewhere, such as *G. aegyptiaca* in G (Herbarium Conservatoire et Jardin botaniques de la Ville de Genève) and could not be obtained during the period of this study.
4. Herbaria such as HMAS (China), AMH (India) did not respond our requests.

5. Some herbaria sent some other collections and not the holotypes that we were looking for, such as MA, with *Guignardia oxyriae*, *G. buxi* and others.
6. Many herbaria specimens contained fungi other than *Guignardia*.
7. In a few instances, the specimens that are listed in Index Fungorum did not exist and taxonomy of those fungi has become nomen invalid (invalid name).

About 107 taxa remained doubtful because the specimens were as under:

1. Limited number of ascomata in the specimens examined.
2. Some holotype specimen packets contained only mounted slides, which unfortunately were not in good condition.
3. Some dried leaves or stem specimens with holotype were in such poor conditions that all needful characters of the fungi could not be ascertained; in such cases, the taxa are treated as doubtful.
4. In species with asexual states and so far not linked to sexual states, it is unclear if the taxa are valid. Holotype specimen of *Guignardia himalayensis* from DAOM and ZT are *Kabatia* sp. Sivanesan (1984) stated that *Kabatia* is an anamorph of *Discosphaerina* whereas Kirk et al. (2008) mentioned this species in Dothioraceae and linked to *Discosphaerina*. Lumbsch (2010) and Wijayawardene et al. (2011) referred *Dischospaerina* in Hyponectriaceae. Based on these varied and conflicting observations, the position of *Kabatia* remained uncertain. Hyponectriaceae is a family with unitunicate asci. Sivanesan's (1984) suggestion that *Kabatia* is synonym to *Discosphaerina* is also now not tenable.

Fresh collections, cultures and molecular sequencing are needed to clarify the phylogeny and taxonomy of all those doubtful species and many cryptic species.

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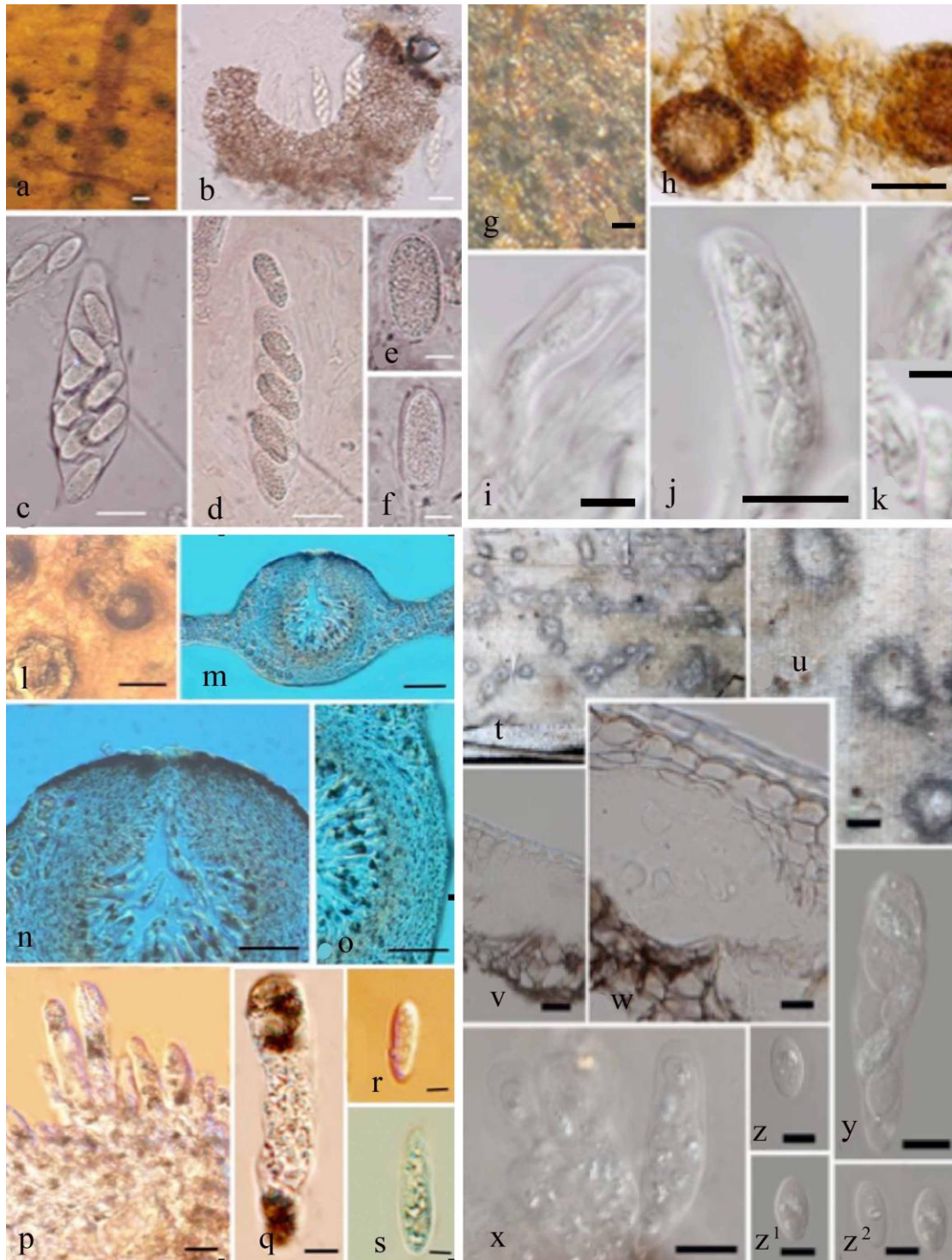
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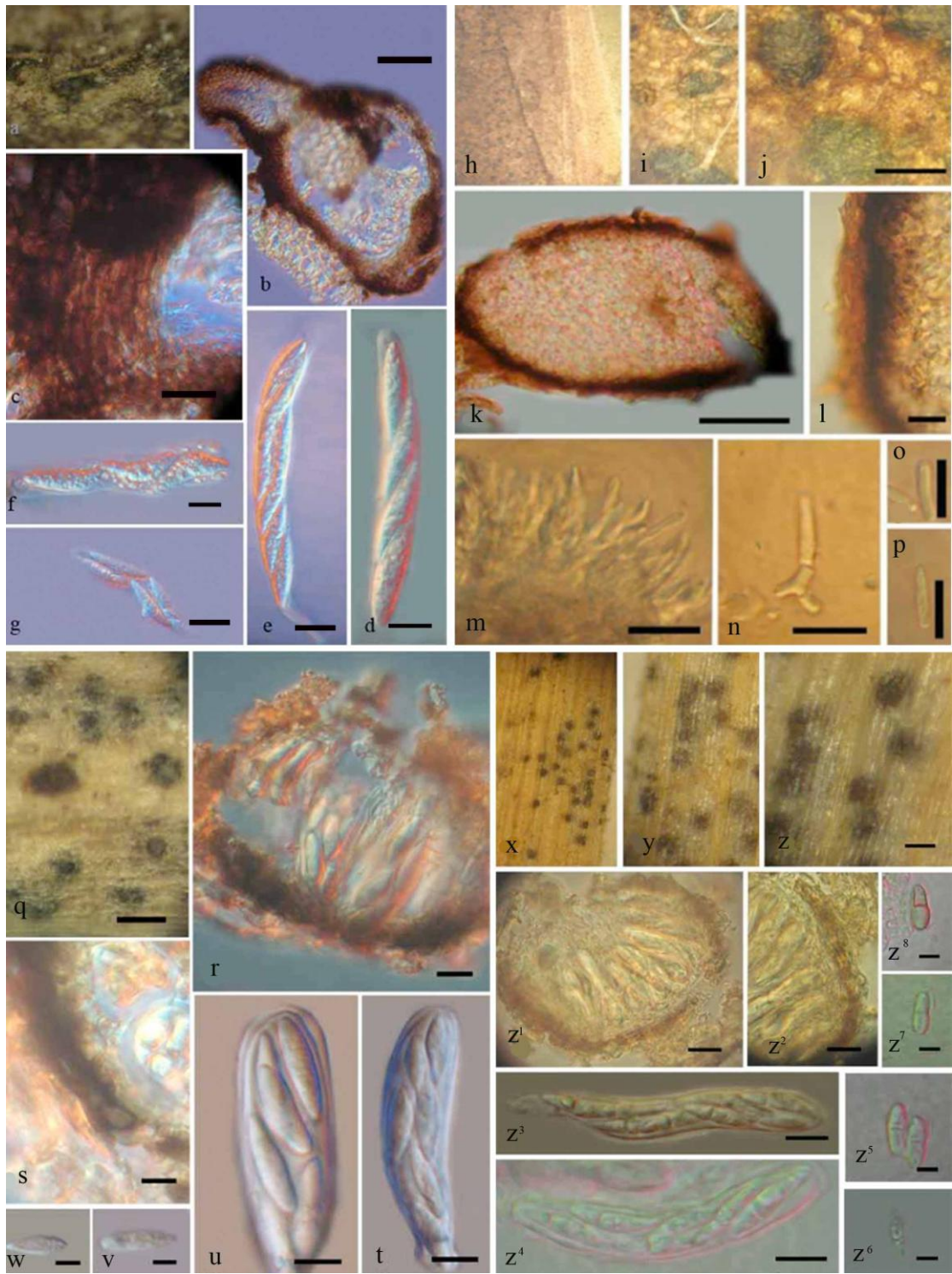
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Appendix I

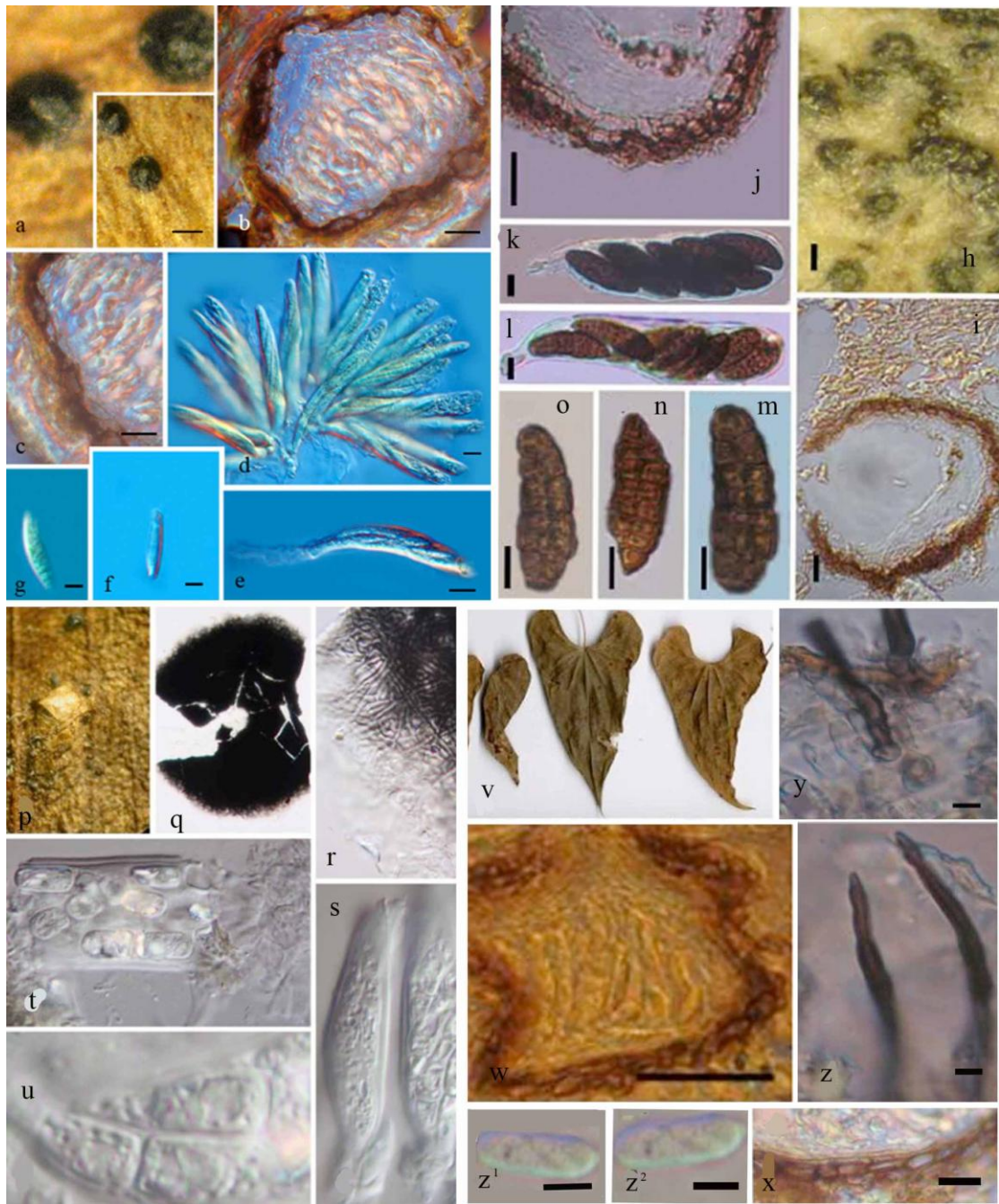
In those doubtful species referred in Section II, a few specimens had ascomata or conidiomata. Majority of these were in poor condition and the taxonomy could not be ascertained. Nevertheless, wherever possible, morphology was studied and whatever fungi observed are illustrated and parked here in Fig. 11-18 with legends. Notes are given in the last column of Table 2 under inference.



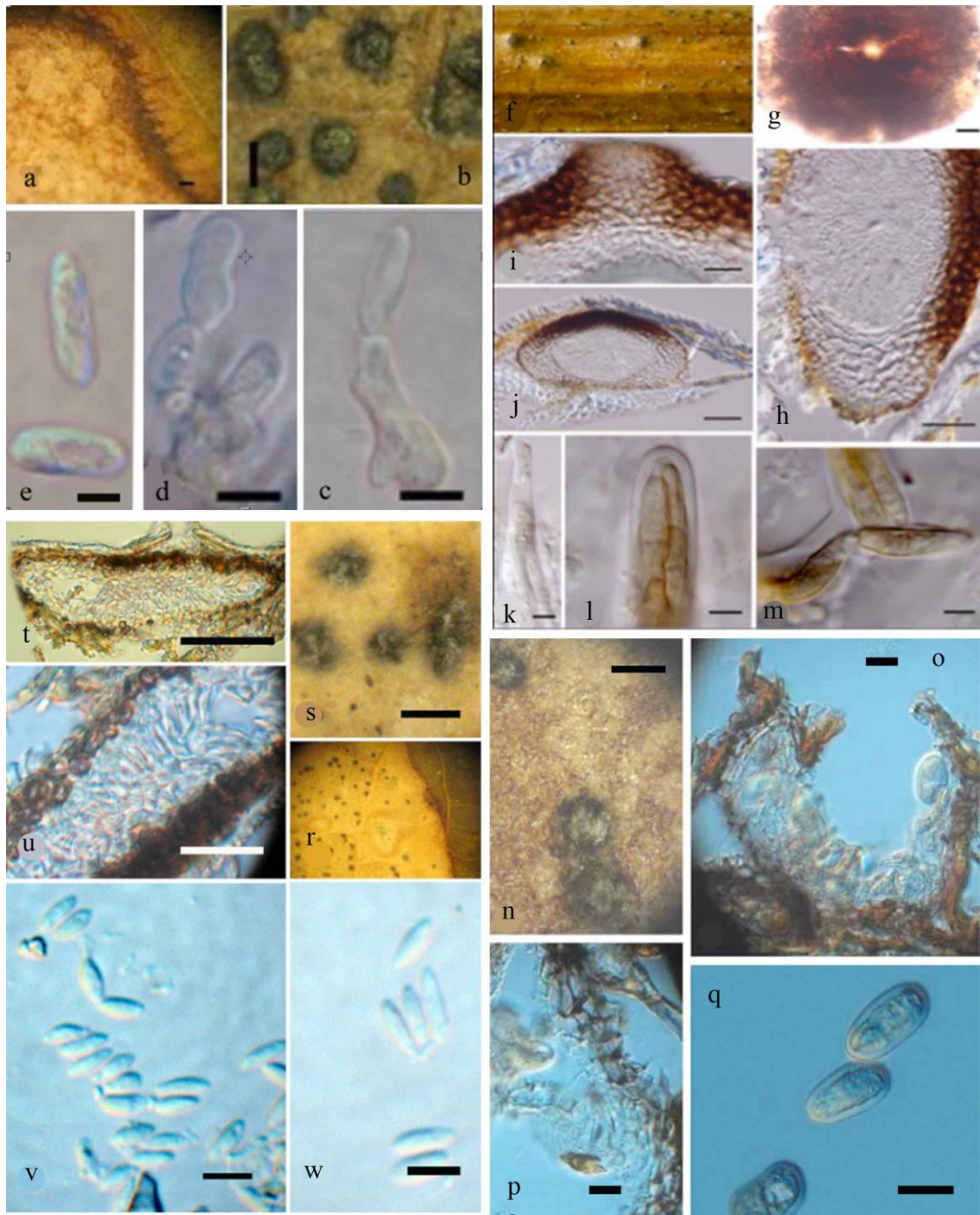
Figs 11a-f – *Colletotrichum* sp. (from holotype of *Guignardia adeana*) – **11g-k** – Unknown ascomycete (from holotype of *G. agerati*) – **11l-s** – *Mastodia tessalata* (from holotype of *G. alaskana*) – **11t-z** – *Botryosphaeria* sp. (from holotype of *G. arengae* Rehm).



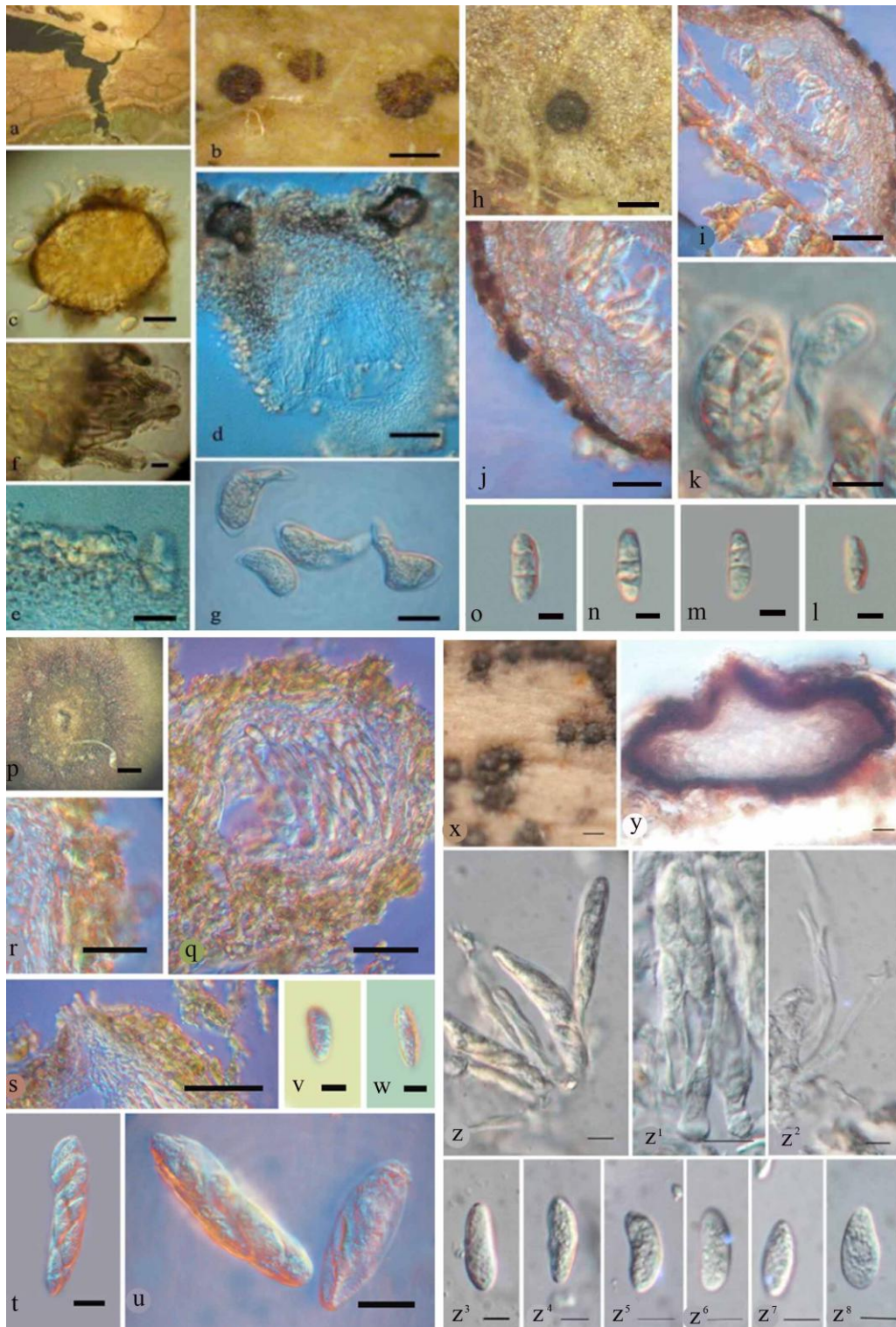
Figs 12a-g – Unknown ascomycete (from holotype of *Guignardia bambusina* Rehm) – **12h-p** – Unknown coelomycete (from holotype of *G. biennis*) – **12q-w** – *Botryosphaeria*-like (from holotype of *G. boltoniae*) – **12x-z⁸** – *Mycosphaerella*-like (from holotype of *G. caricis*).



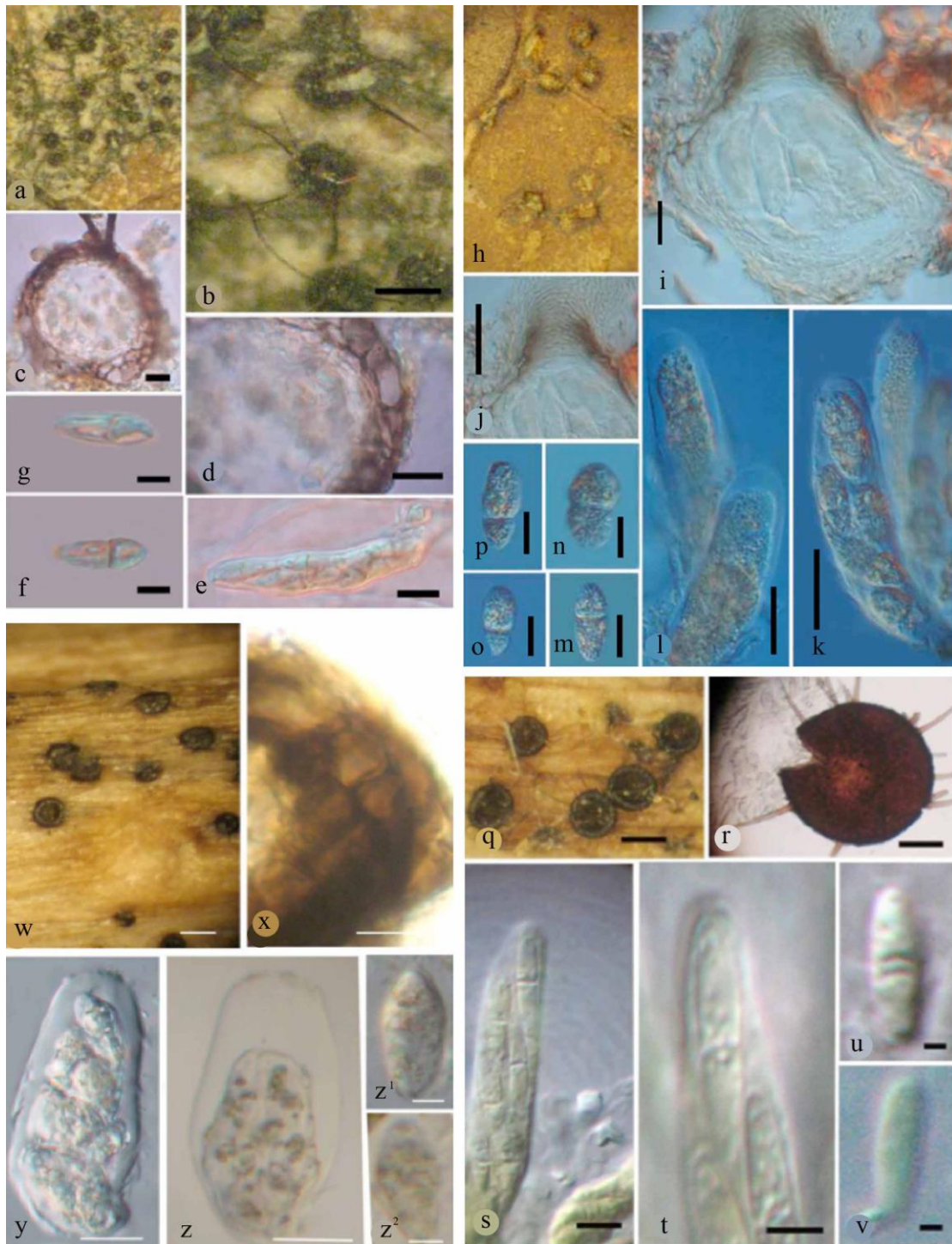
Figs 13a-g – Unknown ascomycetes (from holotype of *Guignardia clusiae*) – **13h-o** – *Pleospora*-like (from holotype of *G. cytisi*) – **13p-u** – *Micropeltis*-like (from holotype of *G. dieffenbachiae* Gonz. Frag. & Cif.) – **13v-z²** – *Colletotrichum* sp. (from holotype of *G. dioscoreae* Sawada).



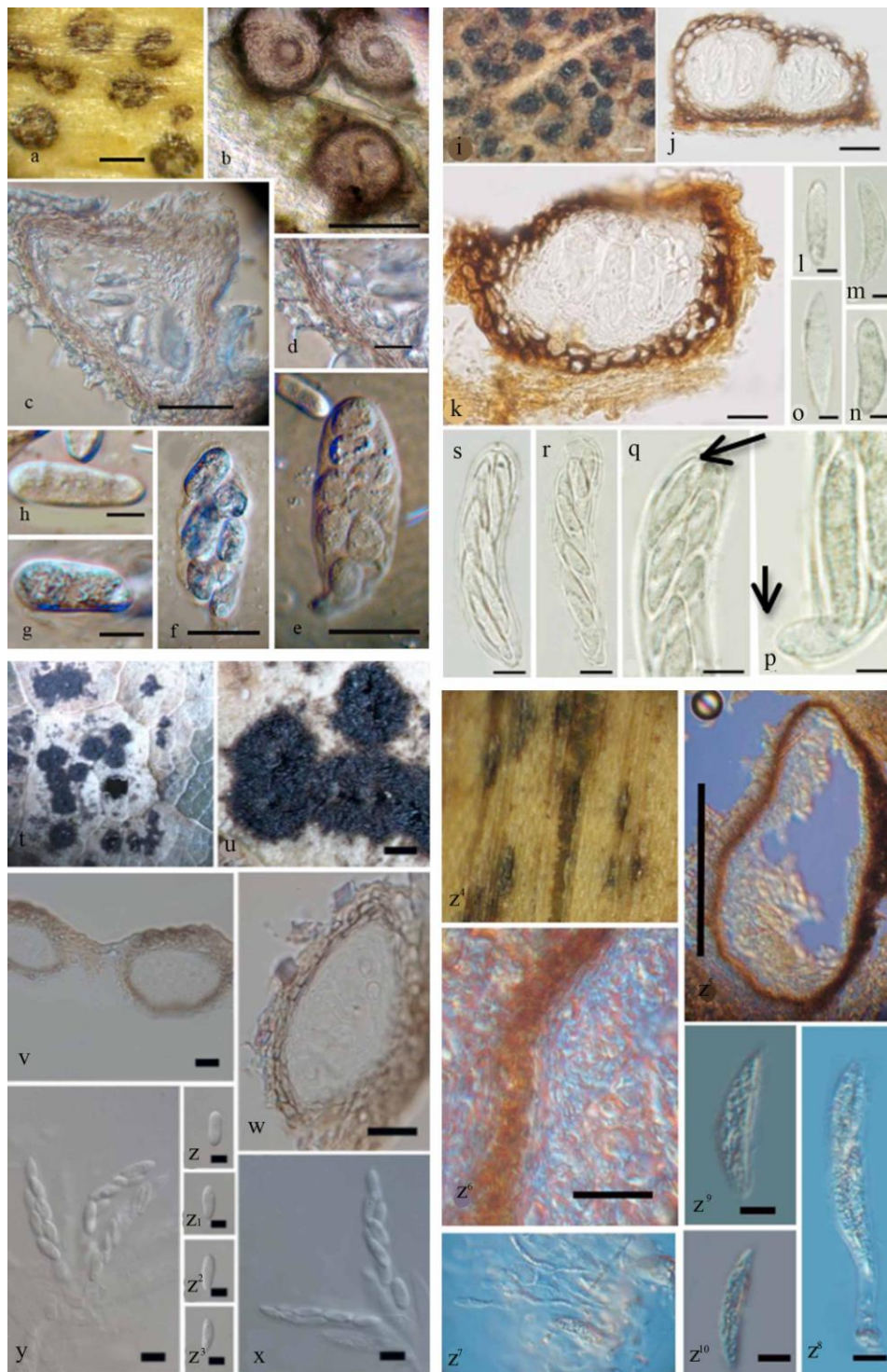
Figs 14a-w – *Colletotrichum* sp. (from holotype of *Guignardia fatsiae*) – **14f-m** – Unknown ascomycete (from holotype of *G. franconicae*) – **14n-q** – Unknown coelomycte (from holotype of *G. fuscocoricae*) – **14r-w** – Phomopsis-like (from holotype of *G. heveae* Syd. & P. Syd.).



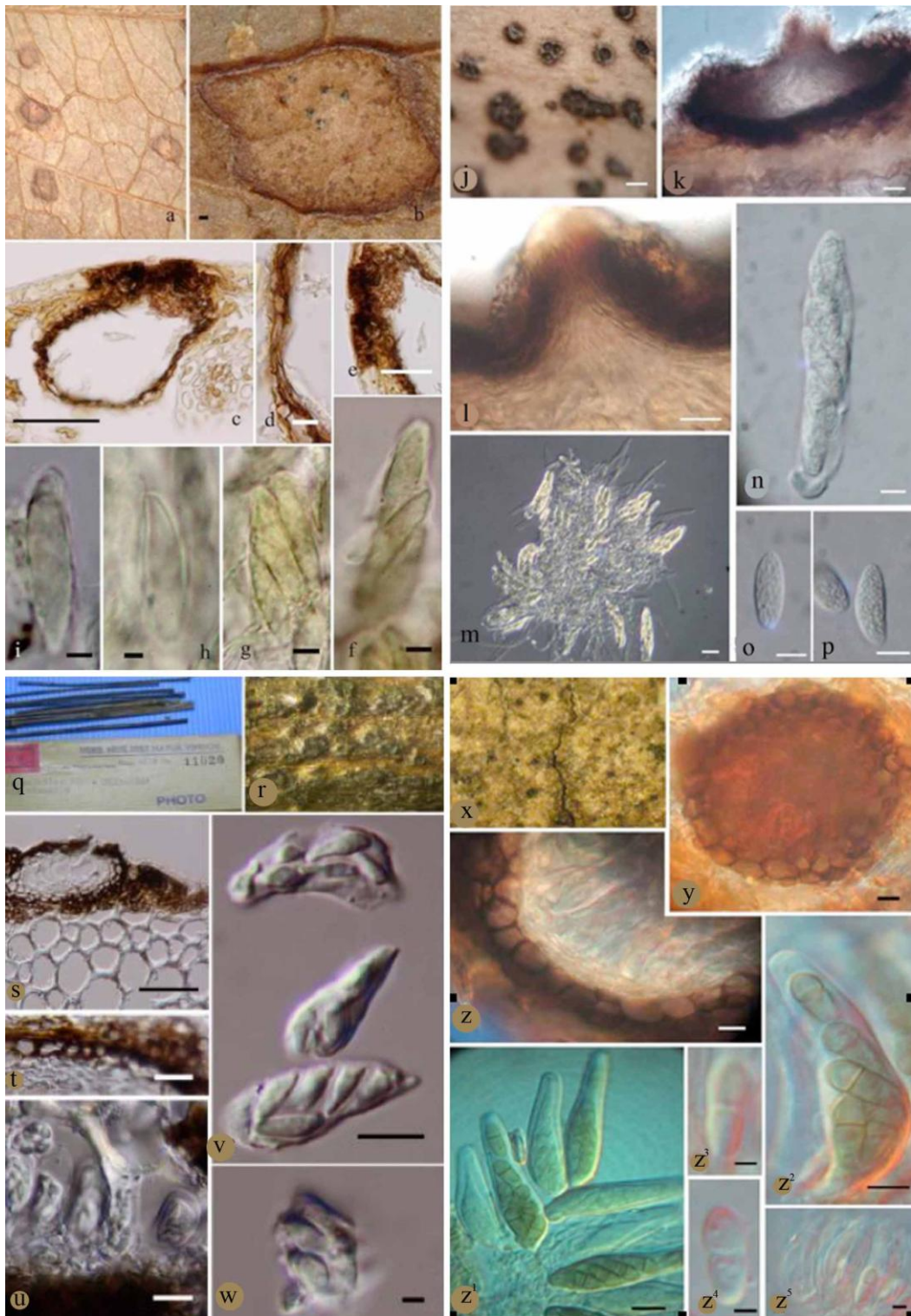
Figs 15a-g – *Kabatia* sp. (from holotype of *Guignardia himalayensis*) – **15h-o** – *Irenopsis ingae* (from holotype of *G. ingae*) – **15p-w** – Unknown ascomycete (from holotype of *G. jussiaeae*) – **15x-z⁸** – *Colletotrichum* sp. (from holotype of *G. manihoticola*).



Figs 16a-g – *Kabatia* sp. (from holotype of *Guignardia mirabilis*) – **16h-p** – *Dothidea*-like (from holotype of *G. nectandrae*) – **16q-v** – Unknown ascomycete (from holotype of *G. oxyriae*) – **16w-z²** – *Botryosphaeria*-like (from holotype of *G. pegani*).



Figs 17a-h – *Colletotrichum* sp. (from holotype of *Guignardia plectroniae*) – **17i-s** – *Physalospora*-like (from holotype of *G. populi*) – **17t-z³** – *Phyllachora* sp. (from holotype of *G. rhytismophila*) – **17z⁴-z¹⁰** – Unknown ascomycete (from holotype of *G. rhynchosporae*).



Figs 18a-i – *Colletotrichum* sp. (from holotype of *Guignardia smilacicola*) – **18j-p** – *Colletotrichum* sp. (from holotype of *G. sojae*). **18q-w** – Unknown bitunicate ascomycete (from holotype of *Guignardia sudetica*). **18x-z**⁵ – *Venturia*-like (from holotype of *Guignardia xylostei*).