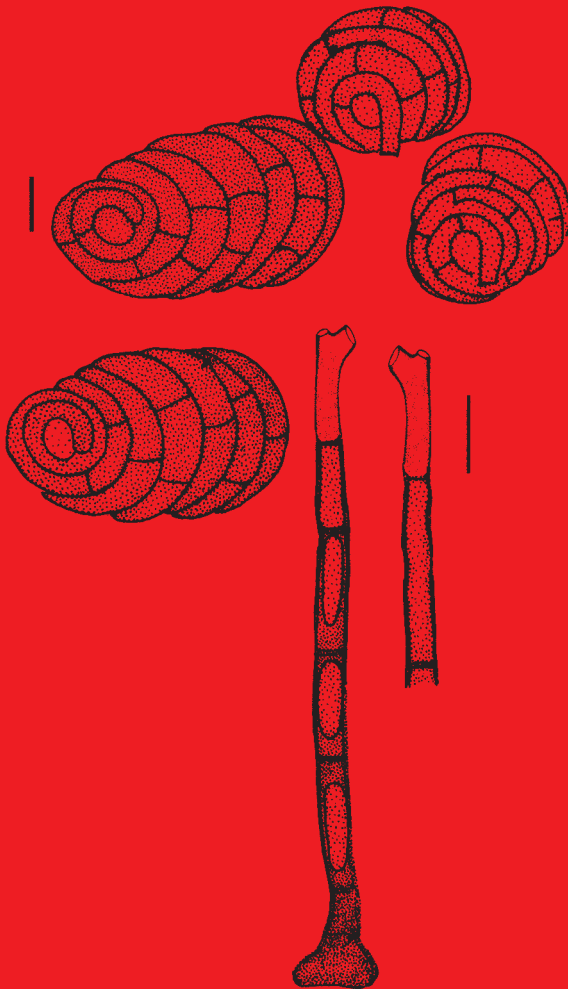


# MYCOTAXON

THE INTERNATIONAL JOURNAL OF FUNGAL TAXONOMY & NOMENCLATURE

VOLUME 121

JULY–SEPTEMBER 2012



*Magnohelicospora iberica* gen. & sp. nov.

(Castañeda-Ruiz & al.— FIG. 2, p. 174)

RAFAEL F. CASTAÑEDA-RUIZ, *artist*

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THE INTERNATIONAL JOURNAL OF FUNGAL TAXONOMY & NOMENCLATURE

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VOLUME 121

JULY–SEPTEMBER, 2012

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CONSISTING OF I–XII + 502 PAGES INCLUDING FIGURES

ISSN 0093-4666 (PRINT)

<http://dx.doi.org/10.5248/121.cvr>

ISSN 2154-8889 (ONLINE)

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## VOLUME 105

- p. 174, line 11      *for: Gloeoporus niger*  
                           *read: Gloeoporus dichrous* var. *niger*

## VOLUME 120

- p.69, line 37      *for: with warts or a irregular covering layer of various thickness*  
                           *read: with warts or an irregular covering layer of various thickness,*
- p.70, line 3      *for: f. Asci with ascospores. g. Conidiophores and conidia.*  
                           *read: f. Conidiophores and conidia. g. Asci with ascospores.*
- p.100, line 21      *for: Shangri La*  
                           *read: Shangri-La*
- p. 109, line 28      *for: lichesterinic, protolichesterinic, nephrosteranic,*  
                           *read: lichesterinic, protolichesterinic, nephrosterinic,*
- p. 109, line 31      *for: except nephrosteranic,*  
                           *read: except nephrosteranic,*
- p. 110, line 18      *for: the absence of lobaric and fatty acids*  
                           *read: the absence of fatty acids*
- p. 157, line 3      *for: AKBAR KHODAPARAST*  
                           *read: SEYED AKBAR KHODAPARAST*
- p.199, line 9      *for: there were recorded*  
                           *read: there were three records*
- p.203, line 3      *for: Telleria*  
                           *read: Telleria*
- p.257, line 5      *for: Cleistocybe vernalis* Ammirati et al. cluster sister to the  
   *C. acromelalga/C. amoenolens* pair  
                           *read: Cleistocybe vernalis* Ammirati et al. clusters sister to the  
   *C. acromelalga/ C. amoenolens* pair
- p.264, lines 10–11      *for: Additionally, our analyses show only a 91% pairwise*  
   ITS sequence identity...  
                           *read: Additionally, our analyses show only a 94.4% pairwise*  
   ITS sequence identity...
- p.289, 4<sup>th</sup> from bottom      *for: ...National Natural Science Foundation Program of*  
   PR China (31160008, 31060008).  
                           *read: ... National Natural Science Foundation Program of*  
   PR China (31160008, 31060008,31260007).
- p. 401, line 19      *for: in July, 2009 is*  
                           *read: in July 2009, is*



## REVIEWERS — VOLUME ONE HUNDRED TWENTY

The Editors express their appreciation to the following individuals who have, prior to acceptance for publication, reviewed one or more of the papers prepared for this volume.

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## FROM THE EDITOR-IN-CHIEF

MELBOURNE CODE PUBLISHED — Authors are urged to consult the new International Code of Nomenclature for algae, fungi, and plants (Melbourne Code) [McNeill et al. 2012]. Fortunately for web-users, the Articles, Notes, and Recommendations are freely available online at <<http://www.iapt-taxon.org/nomen/main.php>>. Official hard copy may be ordered from Koeltz Scientific Books [Regnum Vegetabile 154. A.R.G. Gantner Verlag KG. ISBN 978-3-87429-425-6].

MYCOBANK, INDEXFUNGORUM & FUNGAL NAME ARE THE 2013 OFFICIAL NOMENCLATORIAL REPOSITORIES — The MELBOURNE CODE requires that an identifier issued by a recognized repository be cited in the protologue for valid publication of a new taxon in 2013. MYCOBANK <<http://www.mycobank.org>>, established in 2005 as the first fungal nomenclatorial repository and now overseen by the International Mycological Association, was joined by INDEX FUNGORUM <<http://www.indexfungorum.org>> in 2009 and FUNGAL NAME <<http://fungalinfo.im.ac.cn/fungalname/fungalname.html>> in 2010. MYCOTAXON initially required a MYCOBANK identifier seven years ago; recently, however, we have also accepted numbers from INDEXFUNGORUM and FUNGAL NAME and will continue to do so.

This past November (2012) representatives from the repositories noted above signed a Memorandum of Cooperation agreeing to work together under the guidance of the Nomenclature Committee for Fungi (NCF). In December the NCF voted by a 71% majority to accept all three registries beginning 1 January 2013, with the NCF recommendation to be ratified by the 2014 Bangkok International Mycological Congress, provided the IMC finds multiple registries workable and effective.

For more information, see Redhead & Norvell (2012; IMA Fungus 3(2): 44–45).

MYCOTAXON 121 FINALLY COMPLETED! — We greatly regret our very late 'July-September' volume and appreciate even more everyone's patience during the recent difficult period. Although 2012 brought health challenges that both editors would prefer not to have encountered, we are now conquering our manuscript backlog and going forward. Fortunately, the 55 papers in this volume offer MYCOTAXON's usual cornucopia of fungal delicacies and insights, and there are at least another 55 fascinating submissions awaiting review for Mycotaxon 122, now scheduled for February.

We take this opportunity to thank our authors and experts for their hard work and to wish everyone health, happiness, peace, progress, and health in 2013. (Health is mentioned twice because we are now convinced it is the most important wish of all!)

Warm regards,

Lorelei Norvell (*Editor-in-Chief*)

1 January 2013

**bad taxonomy**



**can KILL**

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# MYCOTAXON

<http://dx.doi.org/10.5248/121.291>

Volume 121, pp. 291–296

July–September 2012

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## **A new species of *Grammothelopsis* (*Polyporales*, *Basidiomycota*) from southern China**

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**ABSTRACT** — A new polypore, *Grammothelopsis subtropica*, is described and illustrated based on three specimens collected in Guangdong and Hunan provinces, southern China. Macroscopically, the new species is characterized by an annual growth habit, resupinate basidiocarps with cream pore surface, and large pores (1–2 per mm); microscopically, it has a dimitic hyphal system with strongly dextrinoid and cyanophilous skeletal hyphae, and its basidiospores are ellipsoid to oblong-ellipsoid, thick-walled, slightly dextrinoid, slightly cyanophilous, and  $12.7\text{--}15.2 \times 4.9\text{--}5.9 \mu\text{m}$ . In addition, dendrohyphidia are abundant in dissepiments. An identification key to the worldwide species of *Grammothelopsis* is provided.

**KEY WORDS** — lignicolous and poroid fungi, *Polyporaceae*, taxonomy

### **Introduction**

*Grammothelopsis* Jülich was established by Jülich (1982) and typified by *G. macrospora* (Ryvarden) Jülich. It is characterized by resupinate to effused basidiocarps, shallow irregular pores, and large thick-walled variably dextrinoid basidiospores. *Grammothelopsis* species occur mostly in tropical Africa and America (Robledo & Ryvarden 2007, Ryvarden & de Meijer 2002), with one species recently described from tropical China (Dai et al. 2011).

As a result of recent surveys of the diversity of wood-inhabiting fungi in southern China, many new fungal species have been described from tropical and subtropical areas of the country (Cui & Dai 2008, 2011; Cui et al. 2009, 2010, 2011; Dai 2012a; Dai & Korhonen 2009; Dai et al. 2003, 2004, 2009, 2010, 2011; Du & Cui 2009; Jia & Cui 2011; Li & Cui 2010; Ma et al. 2011; Yuan 2011; Yuan & Dai 2008a,b; Zhang et al. 2012; Zhou & Dai 2012). However, the diversity and richness of tropical polypores in China are still not well known (Dai 2012b), and there are still many unidentified specimens from tropical China. During examination of southern Chinese polypore collections, an

additional undescribed *Grammothelopsis* species was found, which is described and illustrated in the present paper.

### Materials & methods

The studied specimens are deposited at the herbaria of the Institute of Microbiology, Beijing Forestry University (BJFC) and the Institute of Applied Ecology, Chinese Academy of Sciences (IFP). The microscopic routine used in the study follows Dai (2010). Sections were studied at magnifications up to  $\times 1000$  using a Nikon Eclipse E 80i microscope and phase contrast illumination. Drawings were made with the aid of a drawing tube. Microscopic features, measurements, and drawings were made from slide preparations stained with Cotton Blue and Melzer's reagent. Spores were measured from sections cut from the tubes. In presenting the spore size variation, the 5% of measurements excluded from each end of the range are given in parentheses. Abbreviations include: IKI = Melzer's reagent, KOH = 5% potassium hydroxide, CB = Cotton Blue, CB+ = cyanophilous, L = mean spore length (arithmetic average of all spores), W = mean spore width (arithmetic average of all spores), Q = variation in the L/W ratios between the specimens studied, n = number of spores measured from given number of specimens. Special color terms follow Petersen (1996).

### Taxonomy

*Grammothelopsis subtropica* B.K. Cui & C.L. Zhao, sp. nov.

FIG. 1

MYCOBANK MB 564797

Differs from other *Grammothelopsis* species by an annual growth habit, resupinate basidiocarps with creamy shallow large pores (1–2 per mm), ellipsoid to oblong ellipsoid, slightly dextrinoid and slightly cyanophilous basidiospores, presence of dendrohyphidia, and absence of hyphal pegs.

TYPE: China, Guangdong Province, Fengkai County, Heishiding Nature Reserve, on fallen angiosperm branch, 1.VII.2010, Cui 9035 (holotype, BJFC).

ETYMOLOGY: *subtropica* (Lat.): refers to the species being distributed in the subtropics.

FRUITBODY — Basidiocarps annual, resupinate, adnate, soft corky, without odor or taste when fresh, becoming corky upon drying,  $\leq 7.5$  cm long, 1.6 cm wide, 0.7 mm thick at center. Pore surface white to cream when fresh, cream upon drying; pores round to angular, 1–2 per mm; dissepiments thin, entire. Sterile margin narrow, white,  $\leq 1$  mm wide. Subiculum cream, thin, ca. 0.2 mm thick. Tubes concolorous with pore surface, corky,  $\leq 0.5$  mm long.

HYPHAL STRUCTURE — Hyphal system dimitic; generative hyphae with clamp connections; skeletal hyphae strongly dextrinoid in Melzer's reagent, CB+, tissues unchanged in KOH.

SUBICULUM — Generative hyphae infrequent, hyaline, thin-walled, 2.1–2.5  $\mu\text{m}$  in diam; skeletal hyphae dominant, hyaline, thick-walled with a wide to narrow lumen, frequently branched, flexuous, interwoven, 2.3–2.8  $\mu\text{m}$  in diam.

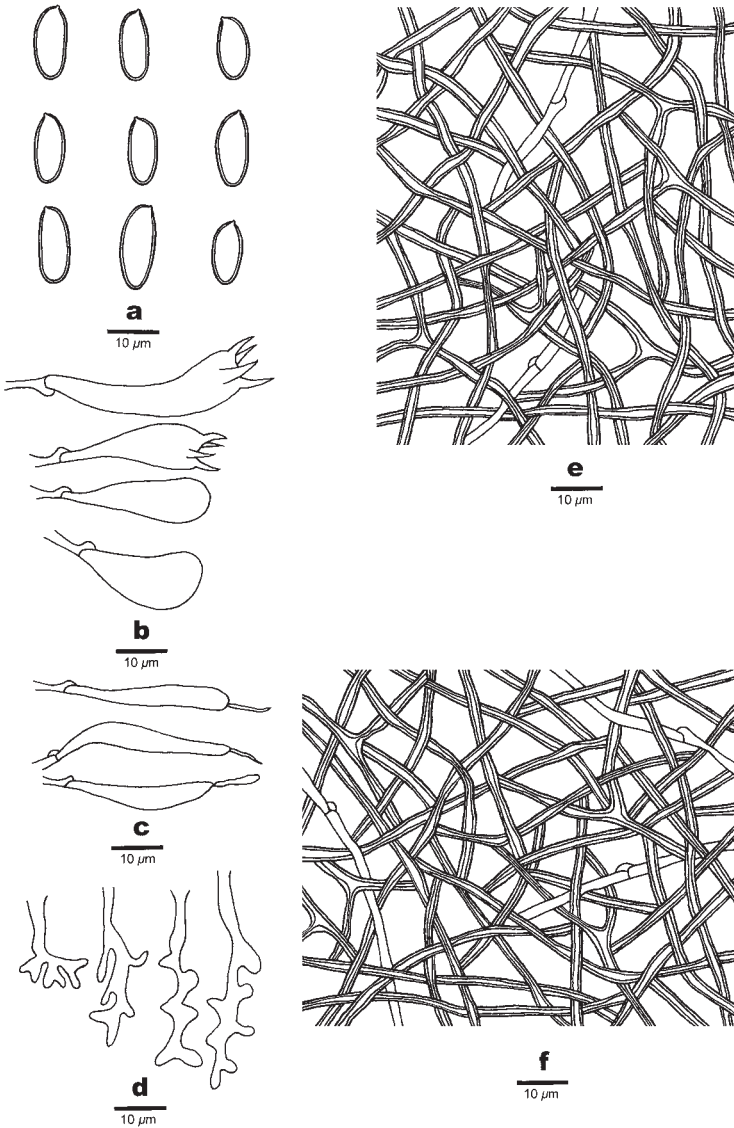


FIGURE 1. *Grammothelopsis subtropica* (holotype) microscopic structures.  
a: Basidiospores. b: Basidia and basidioles. c: Cystidioles.  
d: Dendrohyphidia. e: Hyphae from trama. f: Hyphae from subiculum.

**TUBES** — Generative hyphae infrequent, hyaline, thin-walled, 2–2.3  $\mu\text{m}$  in diam; skeletal hyphae dominant, hyaline, thick-walled with a wide to narrow lumen, frequently branched, flexuous, interwoven, 2–2.5  $\mu\text{m}$  in diam. Dendrohyphidia abundant in dissepiments, hyaline, thin-walled,  $\leq 45 \mu\text{m}$  long. Cystidia absent, fusoid cystidioles present, hyaline, thin-walled,  $28.1\text{--}36 \times 4.2\text{--}6.4 \mu\text{m}$ ; basidia clavate to pear-shaped, with four sterigmata and a basal clamp connection,  $36.5\text{--}39.1 \times 8.9\text{--}9.8 \mu\text{m}$ ; basidioles dominant, mostly pear-shaped, slightly smaller than basidia.

**SPORES** — Basidiospores ellipsoid to oblong-ellipsoid, hyaline, thick-walled, smooth, slightly dextrinoid in Melzer's reagent, weakly CB+,  $(11.2\text{--})12.7\text{--}15.2(-16) \times (4.7\text{--})4.9\text{--}5.9(-6.1) \mu\text{m}$ ,  $L = 13.7 \mu\text{m}$ ,  $W = 5.3 \mu\text{m}$ ,  $Q = 2.4\text{--}2.7$  ( $n = 90/3$ ).

**ADDITIONAL SPECIMENS EXAMINED:** CHINA. GUANGDONG PROVINCE, FENGKAI COUNTY, Heishiding Nature Reserve, on fallen angiosperm branch, 1.VII.2010, Cui 9041 (BJFC); HUNAN PROVINCE, YIZHANG COUNTY, Mangshan Nature Reserve, on fallen angiosperm trunk, 24.VI.2007, Li 1662 (IFP).

## Discussion

Six species have been recorded in *Grammothelopsis*: *G. bambusicola* Ryvar den & de Meijer, *G. incrustata* A. David & Rajchenb., *G. neotropica* Robledo & Ryvar den, and *G. puiggarii* (Speg.) Rajchenb. & J.E. Wright were found in Central and South America (David & Rajchenberg 1985; Rajchenberg & Wright 1987; Robledo & Ryvar den 2007; Ryvar den & de Meijer 2002), *G. macrospora* in tropical Africa (Ryvar den & Johansen 1980), and *G. asiatica* Y.C. Dai & B.K. Cui in tropical China (Dai et al. 2011).

*Grammothelopsis bambusicola* has a dimitic hyphal system with strongly dextrinoid skeletal hyphae and presence of dendrohyphidia. However, it differs from *G. subtropica* in having smaller pores (4 per mm) and strongly dextrinoid, wider basidiospores ( $11\text{--}13.5 \times 7.8\text{--}9 \mu\text{m}$ : measured from type specimen by Dai et al. 2011).

*Grammothelopsis macrospora* may be confused with *G. subtropica* due to its resupinate basidiocarps with larger pores (1–2 per mm) and presence of dendrohyphidia, but it is distinguished from *G. subtropica* by its non-dextrinoid and unbranched skeletal hyphae. In addition, its basidiospores are strongly dextrinoid and larger ( $15\text{--}20 \times 7.5\text{--}11 \mu\text{m}$ : Robledo & Ryvar den 2007).

*Grammothelopsis incrustata* and *G. neotropica* also have resupinate basidiocarps and a dimitic hyphal system, but both species have smaller pores (3–4 per mm), non-dextrinoid skeletal hyphae, and distinctly larger basidiospores (*G. incrustata*,  $16\text{--}22 \times 6\text{--}8 \mu\text{m}$ ; *G. neotropica*,  $18\text{--}20 \times 7\text{--}8 \mu\text{m}$ : Robledo & Ryvar den 2007).

*Grammothelopsis puiggarii* shares with *G. subtropica* larger pores (1–2 per mm) and a dimitic hyphal system with strongly dextrinoid skeletal hyphae, but



*G. puiggarii* has larger basidiospores (17–20 × 10–12 µm) and lacks dendrohyphidia (Robledo & Ryvarden 2007).

*Grammothelopsis asiatica* resembles *G. subtropica* in resupinate basidiocarps, a dimitic hyphal system, and similar basidiospores (10.5–13 × 5.4–6 µm). However, *G. asiatica* has smaller pores (3–4 per mm), its skeletal hyphae and basidiospores are non-dextrinoid, and it lacks dendrohyphidia (Dai et al. 2011).

**Key to the species of *Grammothelopsis***

- 1. Dendrohyphidia present .....2
- 1. Dendrohyphidia absent .....4
- 2. Pores 3–4 per mm ..... *G. bambusicola*
- 2. Pores 1–2 per mm .....3
- 3. Basidiospores >15 µm long, hyphal pegs present ..... *G. macrospora*
- 3. Basidiospores <15 µm long, hyphal pegs absent..... *G. subtropica*
- 4. Generative hyphae simple septate..... *G. incrustata*
- 4. Generative hyphae with clamp connections .....5
- 5. Pores 1–2 per mm, basidiospores strongly dextrinoid..... *G. puiggarii*
- 5. Pores 3–4 per mm, basidiospores non-dextrinoid .....6
- 6. Basidiospores >15 µm long ..... *G. neotropica*
- 6. Basidiospores <15 µm long .....*G. asiatica*

**Acknowledgments**

We express our gratitude to Drs. Tatiana B. Gibertoni (Brazil) and Hai-Sheng Yuan (China), who reviewed the manuscript. The research is financed by the Fundamental Research Funds for the Central Universities (Project No. BLYJ201205) and the National Natural Science Foundation of China (Project Nos. 30900006 and 31093440).

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