Synopsis Fungorum 23

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Nomenclatural novelties proposed in this volume:

New genera:

New Species:

New combinations

Content

The genus *Grammothelopsis* (Basidiomycota, aphyllophoroid fungi)

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Abstract
A synopsis of *Grammothelopsis* Jülich (Basidiomycota, aphyllophoroid fungi) is provided and *G. neotropica* Robledo & Ryvarden is described as new.
Key words: Polypores, Peru.

Introduction

Grammothelopsis was described by Jülich (1982) to accommodate *Grammothele macrospora* Ryvarden, which was based on a collection from Kenya in Africa. *Grammothele* is typified by *G. lineata* Berk. & M. A. Curtis, a species characterized by rather small, hyaline basidiospores, very different from the large thick-walled spores found in *G. macrospora* (see below). Both species have a hymenophore of shallow irregular pores, intermediate between a reticulate corticoid species and an ordinary polypore, and the genus was originally based on this character. Subsequently several additional species were described in *Grammothelopsis*. Following collections of a new species of *Grammothelopsis* from Peru, we decided it would be desirable to review the genus with descriptions of all accepted species.
The type species, *Grammothelopsis macrospora* (Ryvarden) Jülich, has thick-walled, dextrinoid spores and partly dextrinoid skeletal hyphae with a variable degree of branching which remind one strongly of a *Perenniporia* species.

However, the hymenium lining both the tube walls and the bottom of the tubes is a character unknown in that genus, which only includes species with an ordinary poroid hymenophore, distinctly different from the shallow pores seen in *G. macrospora.*

It is interesting to note that all species of *Grammothelopsis* are described from single collections, with the exception of *G. puiggarii* (Speg.) Rajchenb. & J.E. Wright where a second collection was found in 2002 (Ryvarden & de Meijer, 2002) some 90 years after Spegazzini's description in 1919.

Key to species of *Grammothelopsis*

1. Basidiospores non-dextrinoid **2**
1. Basidiospores dextrinoid **3**

2. Generative hyphae simple septate, hyphae of dissepiments encrusted ..... **2. G. incrustata**
2. Generative hyphae with clamps, hyphae of dissepiments smooth ..... **4. G. neotropica**

3. Basidiospores 11-15 µm long ..... **1. G. bambusicola**
3. Basidiospores longer than 15 µm **4**

4. Dendrohyphidia present in the pore mouths, African species ..... **3. G. macrospora**
4. Dendrohyphidia absent in the pore mouths, American species...**5. G. puiggarii**

1. Grammothelopsis bambusicola Ryvarden & de Meijer
Synopsis Fung. 15: 53, 2002.
Basidiocarp resupinate, effused, adnate, up to 40 mm long, 20 mm wide and 1 mm thick, pore surface white to pale cream, margin white, 1 mm wide, pores angular and regular, 4 per mm, tubes up to 0.7 mm deep, context 300 µm thick, white and cottony.
Hyphal system dimitic, generative hyphae hyaline and with clamps, 2-3 µm wide, skeletal hyphae thick-walled to solid, straight to slightly sinuous, mostly unbranched, but in the pore mouths distinctly arboriform and may easily be interpreted as binding hyphae, strongly dextrinoid, especially in the pore mouths.
Dendrohyphidia not seen.
Basidia mostly collapsed, up to 45 µm long and 10-15 µm wide, with four sterigmata.

Basidiospores broadly ellipsoid, thick-walled and strongly dextrinoid, 11-15 x 8-10 µm, slightly swelling in KOH and then with wall-thickness up to 2 µm.
Substrata and distribution. Known only from an unidentified, dead bamboo species in Brazil, Paraná, Colombo, Embrapa Florestas, 900 m.s.m, the type locality.
Remarks. The species reminds one of *G. puiggarii* from Brazil, but this latter species has larger, dentate and irregular pores (about 1 per mm) and larger basidiospores (17-20 x 10-12 µm). *G. incrustata* A. David & Rajchenb., from Guadeloupe, has large cylindrical basidiospores and strongly encrusted hyphae in the pore mouths as well as simple-septate generative hyphae.

2. Grammothelopsis incrustata A. David & Rajchenb.
Mycotaxon 22: 299, 1985.
Basidiocarp resupinate, effused, more or less circular in the type collection, up to 40 mm in diameter, pore surface ochraceous, margin white and slightly cottony, pores circular 3-4 per mm, pore mouth covered with a whitish to yellow pruina, tubes concolorous with pore surface, up to 0.7 mm deep, trama thin and resinous, context very thin and white.
Hyphal system dimitic, generative hyphae hyaline and simple-septate, 2-3 µm wide, skeletal hyphae arboriform, thick-walled to solid and sinuous, 2-4 µm wide, non-dextrinoid. The pruina along the pore mouths consists of generative hyphae covered with numerous small rod-like crystals.
Dendrohyphidia not seen.
Basidia not seen.
Basidiospores cylindrical to ellipsoid, thick-walled and non-dextrinoid, 16-22 x 6-8 µm, some spores slightly truncate and with a distinct germ pore.
Substrata and distribution. Only known from an unknown dead hardwood in the type locality.
Remarks. The species is unique in the genus in having simple-septate and encrusted generative hyphae and large, non-dextrinoid spores

3. Grammothelopsis macrospora (Ryvarden) Jülich
Bibl. Mycologica 85: 400, 1981. - *Grammothele macrospora* Ryvarden, Prelim. Polypore Fl. East Africa p. 43, 1980.
Basidiocarp resupinate, effused, about 60 x 80 mm in the type collection, adnate, up to 400 µm thick, pore surface pale brown, margin white to pale ochraceous, narrow to wide, pores angular to elongated, on average 1-2 per mm, some pores up to 3 mm long, finely dentate, pore mouths and tube walls dotted with white hyphal pegs, partly as conical studs, partly as elongated short ridges, tubes pale brown, context very thin, pale brown.

Hyphal system di-trimitic, generative hyphae hyaline and with clamps, 1-3 µm wide, trama and subhymenium dominated by skeletal hyphae, thick-walled to solid, pale yellowish, straight to slightly sinuous, mostly unbranched, but in the pore mouths distinctly arboriform and may easily be interpreted as binding hyphae. We prefer to call them arboriform skeletal hyphae as they apparently have a long unbranched base; these branched parts in the pore mouths have a strong to weak dextrinoid reaction, otherwise the skeletal hyphae are non-dextrinoid.
Dendrohyphidia richly present both in the hymenium and along the sterile pore mouths, up to 30 µm long.
Basidia both in the bases of the tubes and on the tube walls, up to 50 µm long and 10-18 µm wide, but not seen fully mature with sterigmata.
Basidiospores broadly ellipsoid, thick-walled and strongly dextrinoid, 15-20 x 7.5-11 µm, wall-thickness up to 2 µm, with a distinct germ pore.
Substrata and distribution. Only known from deciduous wood in the type locality in the Coast province of Kenya.
Remarks. The species is highly characteristic with its large, dextrinoid, thick-walled spores and the dendrohyphidia which have not been observed in any other species of the genus.

4. Grammothelopsis neotropica Robledo & Ryvarden **nov. sp.** **Fig. 1**
Ad *G. puiggarii* (Speg.) Rajchenb. & J. E. Wright, sed pori 4 per mm (1-2 per mm in *G. puiggarii*) et basidiosporis angustiores (7-8 µm) et non dextrinoidei (strongly dextrinoid and 10-12 µm wide in *G. puiggarii*).
Holotype: Peru, Junin dep. La Merced, Kimo, 600 m.s.m, 2. March.2007, Ryvarden 47361, O, Isotype in CORD.
Basidiocarp resupinate, effused, adnate, up to 110 mm long, 10 mm wide and 1 mm thick, pore surface ochraceous, margin white, 1 mm wide, pores angular and regular, 4 per mm, tubes up to 0.7 mm deep, context 300 µm thick, white and cottony.
Hyphal system dimitic, generative hyphae hyaline and with clamps, 2-3 µm wide, skeletal hyphae 2-3 µm wide, thick-walled to solid, straight to slightly sinuous, mostly unbranched, but in the pore mouths distinctly arboriform and may easily be interpreted as binding hyphae, without reaction in Melzer's reagent.
Dendrohyphidia not seen.
Basidia mostly collapsed, up to 42 µm long and 10-15 µm wide, with four sterigmata.
Basidiospores broadly ellipsoid, thick-walled and without reaction in Melzer's reagent, 18-20 x 7-8 µm, slightly truncate, wall-thickness up to 2 µm, with a distinct germ pore.

Substrata and distribution. Known only from an unidentified hardwood log at the type locality.
Remarks. The species is recognized by its large, broadly ellipsoid, non-dextrinoid, thick-walled basidiospores, clamped generative hyphae and angular and regular pores (4 per mm). It is similar to *G. puiggarii,* but the latter species has larger pores (1-2 per mm) and wider basidiospores (10-12 µm wide) which are strongly dextrinoid. *G. incrustata* also has non-dextrinoid basidiospores, but has encrusted gernerative hyphae with simple septa. Macroscopically *G. neotropica* is similar to *G. bambusicola,* but the latter species has skeletal hyphae and smaller basidiospores (11-15 x 8-10 µm) which are strongly dextrinoid.

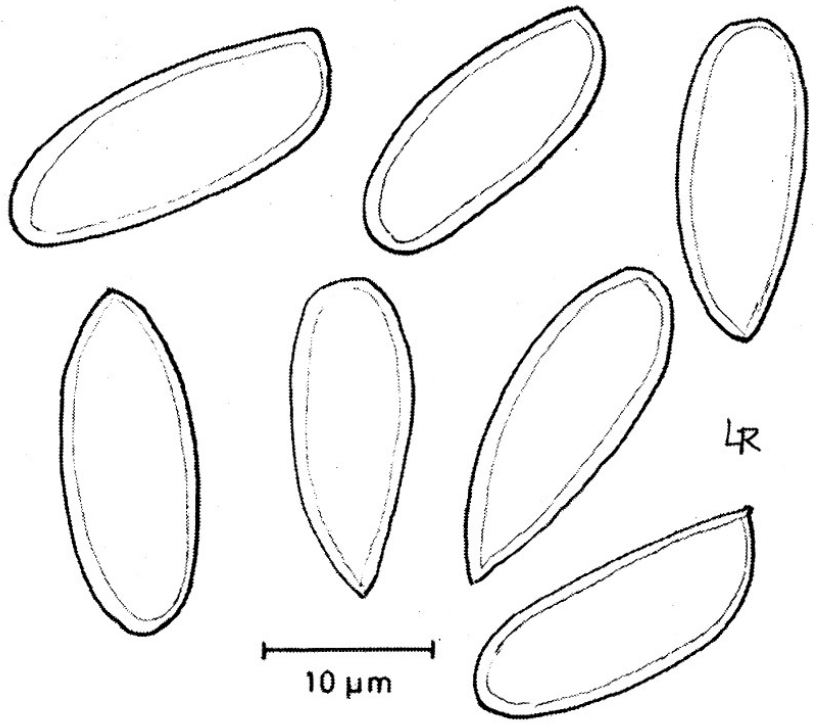

Fig 1. *Granmmothelopsis neotropica*, basidiospores

5. Grammothelopsis puiggarii (Speg.) Rajchenb. & J.E. Wright
Mycologia 79: 253, 1987. – *Hymenogramme puiggarii* Speg., Bol. Acad. Nac. Cien. Córdoba 23: 412, 1919.
Basidiocarp resupinate, effused, adnate, up to 40 mm long, 20 mm wide and 1 mm thick, pore surface ochraceous, margin white, 1 mm wide, pores angular and regular, 1-2 per mm, tubes up to 6 mm deep, context 300 µm thick, white and cottony.
Hyphal system dimitic, generative hyphae hyaline and with clamps, 2-3 µm wide, skeletal hyphae thick-walled to solid, straight to slightly sinuous, mostly unbranched, but in the pore mouths distinctly arboriform and may easily be interpreted as binding hyphae, strongly dextrinoid, especially in the pore mouths.
Dendrohyphidia not seen.
Basidia mostly collapsed, up to 35 µm long and 10-12 µm wide, with four sterigmata.
Basidiospores broadly ellipsoid, thick-walled and strongly dextrinoid, 17-20 x 10-12 µm.
Substrata and distribution. Brazil, São Paulo, which is the type locality and where the second collection was also made (see Ryvarden & de Meijer, 2002).
Remarks. The species is recognized by its large, angular pores (1-2 per mm), its large, dextrinoid, thick-walled basidiospores, and its dextrinoid skeletal hyphae.

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Ryvarden, L. & de Meijer, A. A. R. 2002: Studies in neotropical polypores 14. New species from the state of Paraná, Brazil. Synopsis Fung. 15: 34-69.