
Three new species of *Postia* (*Aphyllphorales*, Basidiomycota) from China

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Three species of *Postia* (*Aphyllphorales*, Basidiomycota) from China are described as new. *Postia calcarea* is characterized by the pendent growth habit, chalky fruitbody, absence of cystidia, and by narrow and allantoid basidiospores. *Postia gloecystidiata* has pileate basidiocarps with hispid upper surface, presence of gloecystidia and hyphal pegs, and by narrowly cylindrical to allantoid basidiospores. *Postia subundosa* is distinguished from other species in the genus by its stipitate and pendent growth habit, cream to rust brown upper surface, large pores and hard corky to rigid context, brittle tubes, and by cylindrical to allantoid basidiospores. A key to Chinese species of *Postia* is provided.

Key words: Polyporales, *Postia calcarea*, *Postia gloecystidiata*, *Postia subundosa*, taxonomy, wood-rotting fungi.

Introduction

Postia Fr. (*Aphyllphorales*, Basidiomycota) is one of the important genera of brown rot fungi, and it is characterized by an annual growth habit, a monomitic hyphal system with clamp connections, thin-walled basidiospores, and the shapes of basidiospores mainly are ellipsoid, cylindrical to allantoid. Most of them are hyaline and negative in Melzer's reagent and Cotton Blue. However, basidiospores in *Postia caesia* (Schrad.:Fr.) P. Karst. group are greyish to bluish (they are greyish in KOH), and they are weakly amyloid in Melzer's reagent. Species in this genus were addressed in *Oligoporus* Bref. by Gilbertson and Ryvarden (1987), and Ryvarden and Gilbertson (1994), and recently they were treated in *Oligoporus*, *Postia*, *Rhodonina* Niemelä & K.L. Larsson and *Spongipellis* Pat. (Niemelä, 2005). Because there is a dispute on the generic divisions of the species, and in the current paper we followed the wide concept by Jülich (1982), more studies especially molecular data on the phylogeny are badly needed to solve this problem.

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Wood-inhabiting fungi, especially the poroid *Aphyllophorales* in China have been extensively studied during the last 10 years, around 230 specimens belong to *Postia* were collected from 38 forest reserves and forest parks all over China. Some species were published in previous reports (Dai, 2000; Dai and Penttilä, 2006; Dai *et al.*, 2004), but after systematic examination on these materials, 17 species were identified and three undescribed species were found. We hereby make descriptions for these new species. In addition, some of our specimens are still under investigation, and forthcoming papers will deal with them.

Materials and methods

Specimens were mostly collected from field trips during 1993 to 2004. Fresh characters were recorded during the field excursions. Specimens were dried properly using a mushroom dryer with ventilated temperature of 40–50°C. All the studied specimens are deposited at the herbarium of the Institute of Applied Ecology, the Chinese Academy of Sciences (IFP). Anatomy was studied, and measurements and drawings were made from slide preparations stained with Cotton Blue. The microscopic routine used in the study is as presented by Dai and Niemelä (1997). Basidiospores were measured from sections cut from the tubes. IKI stands for Melzer's reagent, KOH for 5% potassium hydroxide, and CB is the abbreviation of Cotton Blue. CB– means acyanophilous, and IKI– means inamyloid and indextrinoid. In presenting the variation in the size of the spores, 5% of the measurements were excluded from each end of the range, and are given in parentheses. In the text the following abbreviations are used: L = mean spore length (arithmetical mean of all spores), W = mean spore width (arithmetical mean of all spores), Q = variation in the L/W ratios between the specimens studied (quotient of the mean spore length and the mean spore width of each specimen), n = number of spores measured from the given number of specimens. Colour terms mostly follow Petersen (1996).

Results

Key to species of *Postia sensu lato* from China

- | | |
|---|----|
| 1. Basidiocarps effused-reflexed, pileate or stipitate | 2 |
| 1. Basidiocarps resupinate..... | 17 |
| 2. Basidiocarps stipitate, usually pendent to dorsally attached | 3 |
| 2. Basidiocarps effused-reflexed or pileate | 4 |

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3. Basidiocarp margin distinctly undulating, pores 1-3 per mm; basidiospores oblong-ellipsoid. <i>P. subundosa</i> Y.L. Wei & Y.C. Dai
3. Basidiocarp margin flat, pores 4-5 per mm; basidiospores broadly ellipsoid .....	..... <i>P. ceriflua</i> (Berk. & M.A. Curtis) Jülich
4. Basidiocarps with distinct grey to bluish tints.....	5
4. Basidiocarps white, cream, yellowish or brown.....	6
5. Usually on gymnosperm; basidiospores > 4 µm in length .....	..... <i>P. caesia</i> (Schrad.:Fr.) P. Karst.
5. Usually on angiosperm; basidiospores < 4 µm in length .....	..... <i>P. alni</i> Niemelä & Vampola
6. Basidiocarps becoming brown when bruised or when dry.....	7
6. Basidiocarps unchanging when bruised or when dry.....	8
7. Gloeocystidia present.....	..... <i>P. leucomallella</i> (Murrill) Jülich
7. Gloeocystidia absent.....	..... <i>P. fragilis</i> (Fr.:Fr.) Jülich
8. Basidiocarps chalky when dry.....	..... <i>P. calcarea</i> Y.L. Wei & Y.C. Dai
8. Basidiocarps fragile, corky or woody hard when dry.....	9
9. Cystidia present.....	10
9. Cystidia absent.....	12
10. Cystidia thick-walled; pileal surface without a thin cuticle.....	11
10. Cystidia thin-walled; pileal surface with a thin cuticle .....	..... <i>P. amurensis</i> Y.C. Dai & Penttilä
11. Cystidia amyloid in Melzer's reagent, basidiospores cylindric.....	..... <i>P. pileata</i> (Parmasto) Y.C. Dai & Renvall
11. Cystidia inamyloid in Melzer's reagent, basidiospores ellipsoid .....	..... <i>P. balsamea</i> (Peck) Jülich
12. Pores bigger, 1-3 per mm.....	..... <i>P. undosa</i> (Peck) Jülich
12. Pores smaller, > 3 per mm.....	13
13. Gloeocystidia present.....	..... <i>P. gloeocystidiata</i> Y.L. Wei & Y.C. Dai
13. Gloeocystidia absent.....	14
14. Basidiocarps mild, upper surface greyish brown.....	..... <i>P. tephroleuca</i> (Fr.) Jülich
14. Basidiocarps bitter, upper surface cream or yellow-brownish.....	15
15. Basidiospores > 2 µm in width; pileal surface with oily drops .....	..... <i>P. guttulata</i> (Peck) Jülich
15. Basidiospores < 2 µm in width; pileal surface without oily drops	16
16. Basidiocarps woody hard when dry; basidiospores oblong-ellipsoid.....	..... <i>P. stiptica</i> (Pers.:Fr.) Jülich

16. Basidiocarps fragile when dry; basidiospores cylindric *P. lactea* (Fr.:Fr.) P. Karst.
 17. Basidiospores > 2 µm in width, cystidia absent 18
 17. Basidiospores < 2 µm in width, cystidia present 19
18. Basidiocarps salmon pink; basidiospores 2.2-3 µm in width
 *P. placenta* (Fr.) M.J. Larsen & Lombard
 18. Basidiocarps white or cream; basidiospores 2-2.3 µm in width
 *P. rancida* (Bres.) M.J. Larsen & Lombard
19. Cystidia thick-walled, amyloid in Melzer's reagent
 *P. pileata* (Parmasto) Y.C. Dai & Renvall
 19. Cystidia thin-walled, inamyloid in Melzer's reagent 20
20. Pores smaller, 5-6 per mm; basidiospores 0.8-1.1 µm in width
 *P. simanii* (Pilát) Jülich
 20. Pores bigger, 3-4 per mm; basidiospores 1-1.3 µm in width
 *P. hibernica* (Berk. & Broome) Jülich

Postia calcarea Y.L. Wei & Y.C. Dai, **sp. nov.** (Fig. 1)

Etymology: calcareous, lime, referring to the chalky fruitbody.

Carpophorum annuum, pileatum; facies pororum eburnea vel crenea; pori rotundi, 4-5 per mm. Systema hypharum monomiticum, hyphae generatoriae fibulatae, hyphae contexti 3-4.3 µm in diam. Sporae cylindricae vel allantoideae, IKI-, CB-, 4-5.4 × 1.1-1.5 µm.

Basidiocarps annual, pileate, pendent, with a narrowed basal attachment, mostly solitary, soft to fibrous when fresh, without odour and taste, chalky and light in weight when dry. Pilei semicircular, up to 5 cm long, 3 cm wide, and 0.8 cm thick; margin obtuse. *Upper surface* smooth, snow-white to cream when fresh, colour unchanged when bruised or drying. *Pore surface* snow-white when fresh, unchanging when bruised, becoming cream coloured up on drying; pores round, 4-5 per mm; dissepiments thin, entire. *Section:* context white and soft when fresh, unchanging and become chalky upon drying, up to 5 mm thick. Tubes white and chalky, up to 3 mm long.

Hyphal system monomitic; all septa with clamp connections; generative hyphae IKI-, CB-, unchanged in KOH. *Contextual hyphae* hyaline, thick-walled with a wide lumen, rarely branched, interwoven, 3-4.3 µm in diam (n = 40/3). *Tramal hyphae* hyaline, thin- to thick-walled, occasionally branched, interwoven, 1.9-3.2 µm in diam (n = 56/3). Hyphal pegs seldom present. Cystidia and cystidioles absent. Basidia clavate, thin-walled, with a basal clamp connection and four sterigmata, 7-13 × 3.2-4.2 µm (n = 14/3). Basidioles in shape similar to basidia, but slightly shorter.

Basidiospores cylindrical to allantoid, hyaline, thin-walled, smooth, IKI-, CB-, (3.8-)4-4.9(-5) × 1-1.2(-1.3) µm, L = 4.24 µm, W = 1.1 µm, Q = 3.67-4.05 (n = 93/3).

Habitat: On fallen angiosperm trunk; fallen branch of *Tsuga*.

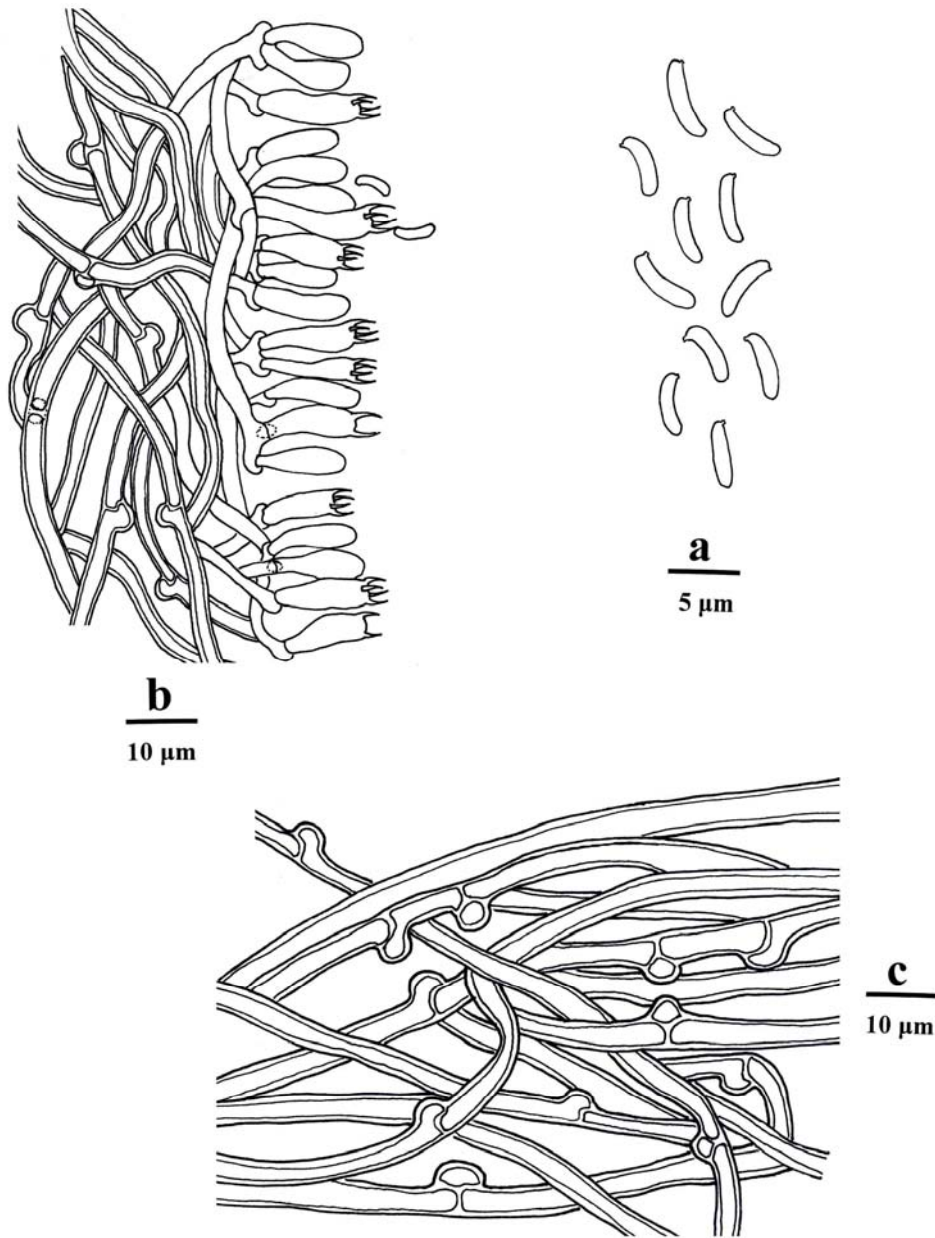


Fig. 1. *Postia calcarea* Y.L. Wei & Y.C. Dai (drawn from the holotype). a) basidiospores; b) a section through tube trama; c) hyphae from context.

Known distribution: Anhui and Zhejiang Province of China.

Material examined: CHINA. Anhui Prov., Huangshan County, Yellow Mts. National Park, 13.X.2004 Dai 6167 (**holotype**, in IFP); *ibid.* Dai 6185 (**paratype** in IFP); Zhejiang Prov., Lin'an County, Tianmushan Nature Reserve, 14.X.2004 Dai 6301 (**paratype** in IFP).

Notes: *Postia calcarea* is closely related to *P. perdelicata* (Murrill) M.J. Larsen & Lombard by sharing rather similar pores and basidiospores, but the latter has effused-reflexed basidiocarps which are broadly attached to the substrate, and its basidiospores are larger, $(4.5-4.8-5.8(-6.3) \times (1.1-1.2-1.5(-1.7)) \mu\text{m}$, $L = 5.2 \mu\text{m}$, $W = 1.3 \mu\text{m}$, $Q = 4-4.4$ (Niemelä, 2005).

Postia calcarea also resembles *P. tephroleuca* (Fr.) Jülich in pore size, but *P. tephroleuca* has greyish upper surface, corky basidiocarps, and in particular wider basidiospores, $(3.9-4-5.5(-6) \times (1.2-1.3-1.7(-1.8)) \mu\text{m}$, $L = 4.6 \mu\text{m}$, $W = 1.4 \mu\text{m}$ (Niemelä, 2005).

Postia ceriflua (Berk. & M.A. Curtis) Jülich has a pendent growth habit, develops fragile that are more or less chalky when dry. So it is somewhat similar to *Postia calcarea*. But *Postia ceriflua* differs from *P. calcarea* by having oblong ellipsoid basidiospores, $(3.3-3.7-4.8(-5.3) \times (1.9-2-2.5(-2.6)) \mu\text{m}$, $L = 4.1 \mu\text{m}$, $W = 2.2 \mu\text{m}$, $Q = 1.8-1.9$ (Niemelä, 2005); $4-5 \times 2-2.5 \mu\text{m}$ (Ryvarden and Gilbertson, 1994).

Postia caesia has similar basidiospores as *P. calcarea*, but has hairy and blue-grayish upper surface, bluish tubes, corky basidiocarps, lacerate dissepiments, and its basidiospores are wider, $(4.2-4.4-5.8(-6.7) \times 1.3-1.7(-1.9) \mu\text{m}$, $L = 5 \mu\text{m}$, $W = 1.5 \mu\text{m}$ (Niemelä, 2005).

Basidiospores of *Postia alni* Niemelä & Vampola are also allantoid, $(4.1-4.4-6(-7) \times (1-1.1-1.3(-1.5)) \mu\text{m}$, $L = 5.1 \mu\text{m}$, $W = 1.2 \mu\text{m}$ (Niemelä *et al.* 2001). However, *Postia alni* has tomentose upper surface, greyish blue pileal surface and tubes, and its spores in mass are pale grayish in KOH, and weakly amyloid Melzer's reagent.

***Postia gloeocystidiata* Y.L. Wei & Y.C. Dai, sp. nov.** (Fig. 2)

Etymology: *gloeocystidiata*, referring to the sterile elements in hymenia of the species.

Carpophorum annuum, pileatum; facies pororum crenea vel ravede brunnea; pori rotundi vel angulati, 3-4 per mm. Systema hypharum monomiticum, hyphae generatoriae fibulatae, hyphae contexti $2.5-4 \mu\text{m}$ in diam. Gloeocystidia clavata. Sporae cylindricae vel allantoideae, IKI-, CB-, $3.7-4.5 \times 1-1.1 \mu\text{m}$.

Basidiocarps annual, pileate, sessile, mostly solitary, soft fibrous to fibrous when fresh, without odour and taste, when dry becoming soft corky. Pilei triquetrous, projecting up 4 cm, 6 cm wide, and 4 cm thick at the base; margin obtuse. **Upper surface** pale grayish brown when juvenile, becoming darker with age, colour unchanged up on drying, hispid, azonate. **Pore surface** white to cream when fresh, colour unchanged when bruised, become

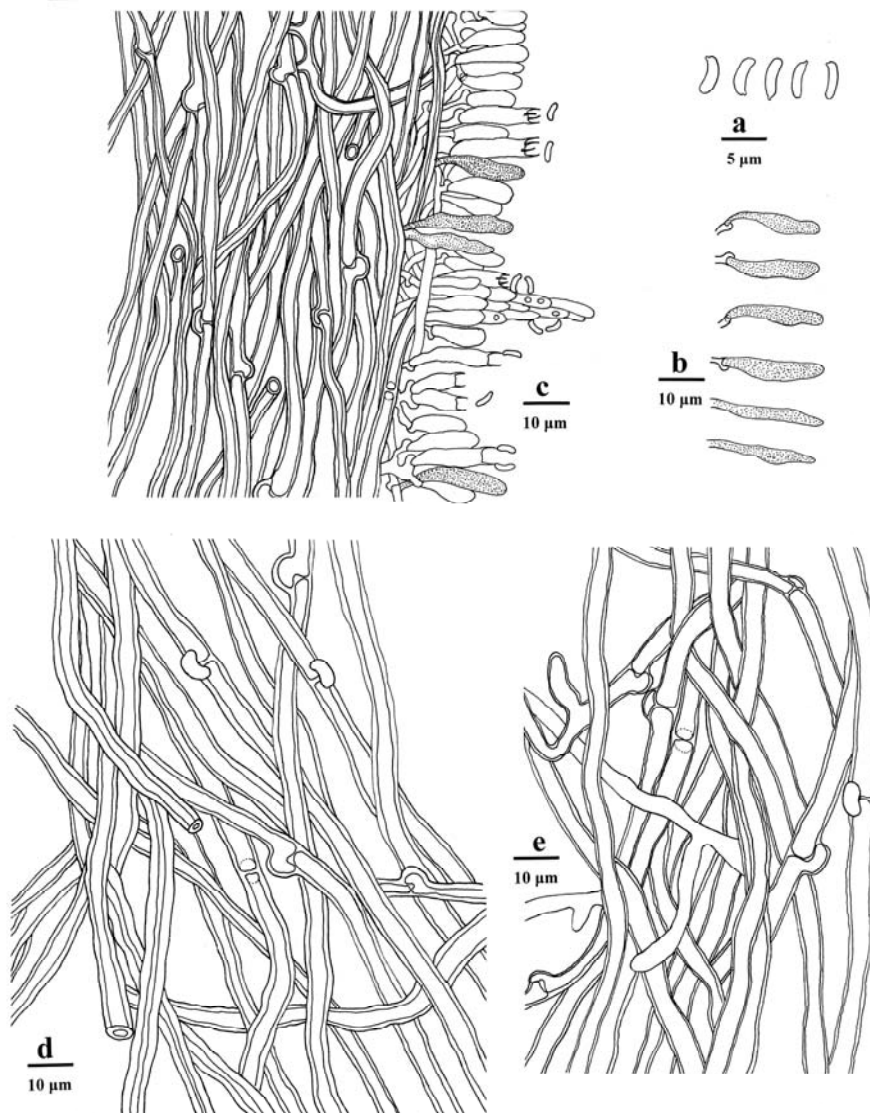


Fig. 2. *Postia gloeocystidiata* Y.L. Wei & Y.C. Dai (drawn from the holotype). a) basidiospores; b) gloeocystidia; c) a section through tube trama; d) hyphae from context; e) hyphae from hispid at pileal surface.

pale yellowish brown when dry; pores round to angular, 3–4 per mm; dissepiments thin, entire to slightly lacerate. *Section:* context white and soft when fresh, cream and soft corky when dry, 1–3 cm thick. Tubes white and brittle when dry, up to 1 cm long.

Hyphal system monomitic; all septa with clamp connections; generative hyphae IKI–, CB–, unchanged in KOH. *Contextual hyphae* hyaline, thin- to

thick-walled with a wide lumen, rarely branched, interwoven, 2.5–4 μm in diam ($n = 45/2$). Hyphae of hirsute tomentum on pileal surface hyaline, thick-walled with a wide lumen, more or less straight, occasionally branched, 2.3–5.8 μm in diam ($n = 24/1$). *Tramal hyphae* hyaline, thick-walled with a wide to narrow lumen, subparallel along the tubes, 2.6–3.9 μm in diam ($n = 55/2$). Hyphal pegs abundant. Gloeocystidia abundant in the hymenium, clavate, thin-walled, dark blue in CB, hyaline in IKI, 13–25 \times 2.9–4.9 μm ($n = 34/2$). Basidia clavate, thin-walled, with a basal clamp connection and four sterigmata, 11–15 \times 3.4–4.7 μm ($n = 16/2$). Basidioles in shape similar to basidia, but slightly shorter.

Spores narrowly cylindrical to allantoid, hyaline, thin-walled, smooth, IKI–, CB–, (3.5–)3.7–4.5(–4.9) \times 1–1.1(–1.2) μm , L = 4.06 μm , W = 1.04 μm , Q = 3.74–4.10 ($n = 60/2$).

Habitat: on dead tree or fallen branch of *Pinus*.

Known distribution: Zhejiang Province of China.

Material examined: CHINA. Zhejiang Prov., Lin'an County, Tianmushan Nature Reserve, 14.X.2004 Dai 6338 (**holotype**, in IFP); *ibid.*, Dai 6327 (**paratype** in IFP).

Notes: *Postia gloeocystidiata* has clavate gloeocystidia in its hymenium, and it is therefore resembles *P. leucomallella* (Murrill) Jülich. But the pore surface of latter species is white to cream when fresh, and it turns yellowish to dirty brownish when strongly bruised or when dry. In addition, *Postia leucomallella* has larger basidiospores, (4.3–)4.6–6.3(–7) \times 1.3–1.8 μm , L = 5.28 μm , W = 1.53 μm and wider gloeocystidia, 19–42(–68) \times 4–9(–9.5) μm (Renvall, 1992).

Postia gloeocystidiata may be related to the *Postia alni* and *Postia caesia* group by sharing the hairy upper surface and narrowly allantoid basidiospores. But both *P. alni* and *P. caesia* have blue-gray shading at the pileal surface and in the hymenophore, and they lack cystidia (Niemelä *et al.*, 2001).

Postia amurensis Y.C. Dai & Penttilä is a similar species having cystidia and allantoid basidiospores. This species was recently described from northern China (Dai and Penttilä, 2006). However, *Postia amurensis* has glabrous upper surface bearing a thin cuticle; cystidia are rarely present, and they are the real hymenial cystidia and longer (30–36 \times 3.5–4.5 μm vs. 14–25 \times 2.9–4.8 μm in *P. gloeocystidiata*); in addition, it occurs on angiosperm wood (Dai and Penttilä, 2006).

Macroscopically, *Postia gloeocystidiata* may be confused with *P. luteocaesia* (A. David) Jülich, because the latter has yellowish pores, and it mainly grows on *Pinus* as well, but it is different from *P. gloeocystidiata* by having larger basidiospores (4.7–6.3 \times 1.6–1.9 μm , L = 5.3 μm , W = 1.7 μm , Niemelä, 2005) and absence of gloeocystidia.

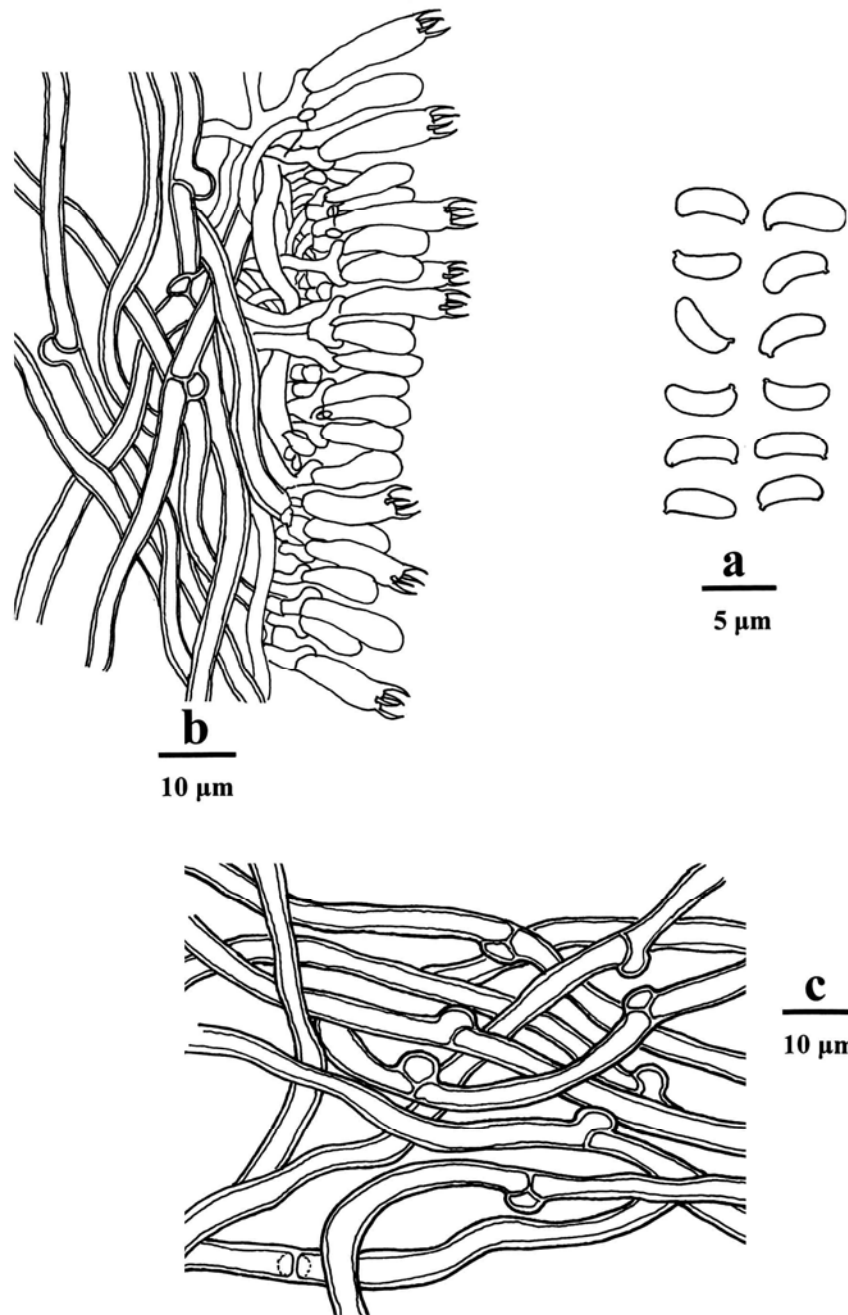


Fig. 3. *Postia subundosa* Y.L. Wei & Y.C. Dai (drawn from the holotype). a) basidiospores; b) a section through tube trama, c) hyphae from context.

***Postia subundosa* Y.L. Wei & Y.C. Dai, sp. nov.**

(Fig. 3)

Etymology: *subundosa*, somewhat resembling *Postia undosa*.

Carpophorum annuum, pileatum, stipitatum; facies pororum crenea vel ravidè brunnea; pori rotundi vel angulati, 1–3 per mm. Systema hypharum monomiticum, hyphae generatoriae fibulatae, hyphae contexti 3–6 µm in diam. Sporae cylindricae vel allantoideae, IKI–, CB–, 4.1–5.8 × 1.6–2.2 µm.

Basidiocarps annual, pileate, sometimes laterally stipitate, pendent, soft to fibrous when fresh, without odour and taste, hard and brittle when dry. Pilei more or less circular, sometimes semi-circular, 2.5–3 cm wide, up to 0.5 cm thick; margin acute, undulate, curved down when dry. *Upper surface* cream to rust brown with age, smooth, azonate or indistinctly sulcate, colour unchanged after drying. *Pore surface* white to cream when fresh, colour unchanged when bruised, becoming cream to pale yellowish brown up on drying; pores round to angular, 1–3 per mm; dissepiments thin, entire to slightly lacerate. *Section:* context white and soft when fresh, become hard corky to rigid when dry, 1–3 cm thick. Tubes white, brittle when dry, up to 1 cm long.

Hyphal system monomitic; all septa with clamp connections; generative hyphae IKI–, CB–, unchanged in KOH. *Contextual hyphae* hyaline, thin- to thick-walled with a wide lumen, occasionally branched, interwoven, 3–6 µm in diam (n = 41/4). *Tramal hyphae* hyaline, thick-walled with a wide lumen, loosely interwoven, 2–4.2 µm in diam (n = 87/4). Cystidia and cystidioles absent. Basidia clavate, hyaline, thin-walled, with a basal clamp connection and four sterigmata, 12–24 × 3.9–4.5 µm (n = 16/2). Basidioles in shape similar to basidia, but slightly shorter.

Spores cylindrical to allantoid, hyaline, thin-walled, smooth, IKI–, CB–, (3–)4.1–5.8(–7) × (1.4–)1.6–2.2(–2.5) µm, L = 4.85 µm, W = 1.85 µm, Q = 2.54–2.71 (n = 125/4).

Habitat: on fallen trunk or rotten wood of *Picea*.

Known distribution: Heilongjiang Province of China.

Material examined: CHINA. Heilongjiang Prov., Yichun, Fenglin Nature Reserve, 7.IX.2002, Dai 3628, (**holotype**, in IFP); *ibid.*, Dai 3608 (**paratype** in IFP); *ibid.*, Dai 3633 (**paratype** in IFP).

Notes: *Postia subundosa* is occurring on spruce wood. It resembles to *P. undosa* (Peck) Jülich by having undulate pileal margin and same size pores, and was previously treated as *P. cf. undosa* (Dai and Penttilä, 2006). However, the latter species usually has refused-reflexed basidiocarps, and its pileal surface is light coloured. The critical difference is its size of basidiospores: they are narrower in *P. undosa* (4.5–6 × 1–1.5 µm, Ryvarden and Gilbertson, 1994; (4–)4.3–5.9(–6.5) × (1.1–)1.3–1.8(–1.9) µm, L = 5 µm, W = 1.5 µm, Q = 3.2–3.6, Niemelä, 2005).

Postia ceriflua and *Postia lowei* (Pilát) Jülich may be sometimes confused with *P. subundosa*, but *P. ceriflua* has smaller pores (3–4 per mm)

and shorter and wider basidiospores, $(3.3\text{--}3.7\text{--}4.8(-5.3)) \times (1.9\text{--}2\text{--}2.5(-2.6))$ μm , $L = 4.1 \mu\text{m}$, $W = 2.2 \mu\text{m}$, $Q = 1.8\text{--}1.9$ (Niemelä, 2005). *Postia lowei* can be macroscopically distinguished from *P. subundosa* by its smaller pores, 3–4 per mm (Gilbertson and Ryvarden 1987), and in microscope its hyphae become swollen in KOH (Renvall, 1992).

Other specimens examined: Postia alni. China. Hubei Prov., Shennongjia Nat. Res., fallen branch of *Betula*, 2004, Wei 1994; Jilin Prov., Changbaishan Nat. Res., rotten wood of *Tilia*, 2002, Dai 3774, on fallen branch of *Quercus*, 2004, Wei 1913; Liaoning Prov., Baishilazi Nat. Res., rotten wood of angiosperm, 2004, Cui 1110. *P. amurensis*, China. Jilin Prov., Changbaishan Nat. Res., fallen trunk of *Alnus*, 1993, Dai 903; Liaoning Prov., Kuandian Nat. Res., fallen trunk of *Acer*, 2004, Cui 1044. *P. balsamea*, China. Jilin Prov., Changbaishan Nat. Res., rotten wood of *Abies*, 1997, Dai 2459; Xinjiang Auto Reg., Kanasi Nat. Res., fallen trunk of *Larix*, 2004, Wei 1421, Wei 1425; Zhejiang Prov., Tianmushan Nat. Res., fallen branch of *Cryptomeria*, 2004, Dai 6406. *P. caesia*, China. Heilongjiang Prov., Fenglin Nat. Res., fallen trunk of *Abies*, 2002, Dai 3622; Jilin Prov., Changbaishan Nat. Res., fallen trunk of *Pinus*, 2004, Wei 1726; Qinghai Prov., Baishan For. Farm, stump of *Picea*, 2003, Dai 5028; Sichuan Prov., Jiuzhaigou Nat. Res., stump of *Thuja*, 2002, Dai 4121; Xinjiang Auto Reg., Guozigou Nat. Res., fallen trunk of *Picea*, 2004, Wei 1495a. *P. ceriflua*, China. Inner Mongolia Auto Reg., Baiyinaobao Nat. Res., stump of *Picea*, 2003, Cui 251, Cui 272, Cui 277; Xizang Auto Reg., Linzhi Region, rotten wood of *Picea*, 2004, Dai 5387. *P. fragilis*, China. Jilin Prov., Changbaishan Nat. Res., rotten wood of *Abies*, 1993, Dai 830, 1995, Dai 2089; Xizang Auto Reg., Linzhi Region, rotten trunk of *Picea*, 2004, Dai 5580b. *P. guttulata*, China. Jilin Prov., Changbaishan Nat. Res., rotten wood of *Pinus*, 1997, Dai 2373, fallen trunk of *Pinus*, 2004, Wei 1796. *P. hibernica*, China. Hubei Prov., Shennongjia Nat. Res., fallen branch of *Sobus*, 2004, Wei 2043; Jilin Prov. Changbaishan Nat. Res., fallen branch of *Populus*, 2002, Dai 3912; Sichuan Prov. Jiuzhaigou Nat. Res., fallen twig of *Pinus*, 2002, Dai 4199; Xinjiang Auto Reg., Guozigou Nat. Res., fallen trunk of *Picea*, 2004, Wei 1571. *P. lactea*, China. Heilongjiang Prov., Huzhong Nat. Res., fallen trunk of *Betula*, 2003, Dai 4794; Jilin Prov., Changbaishan Nat. Res., rotten wood of *Populus*, 2002, Dai 3829, rotten wood of *Acer*, 2004, Wei 1754. *P. leucomallella*, China. Heilongjiang Prov., Huzhong Nat. Res., fallen trunk of *Larix*, 2003, Dai 4688; Jilin Prov., Changbaishan Nat. Res., rotten wood of *Pinus*, 1995, Dai 2042, rotten wood of *Abies*, 1997, Dai 2460; Xinjiang Auto Reg., Kanasi Nat. Res., fallen trunk of *Populus*, 2004, Wei 1430a. *P. pileata*, China. Hubei Prov., Longmenhe For. Farm, dead tree of angiosperm, 2004, Wei 2063, fallen branch of angiosperm, 2004, Wei 2087; Jilin Prov., Changbaishan Nat. Res., fallen trunk of *Populus*, 2002, Dai 3841, Dai 3906, fallen trunk of angiosperm, 2004, Wei 2327. *P. placenta*, China. Heilongjiang Prov., Fenglin Nat. Res., fallen trunk of *Picea*, 2000, Penttilä 13208; Xinjiang Auto Reg., Kanasi Nat. Res., fallen trunk of *Larix*, 2004, Wei 1338, Wei 1365. *P. rancida*, China. Beijing, Xishan Park, rotten wood of *Prunus*, 1993, Dai 1429; Xinjiang Auto Reg., Kanasi Nat. Res., fallen trunk of *Larix*, 2004, Wei 1429. *P. simanii*, China. Hubei Prov., Shennongjia Nat. Res., fallen twig of angiosperm, 2004, Wei 2142; Jilin Prov., Changbaishan Nat. Res., rotten branch of *Alnus*, 2005, Dai 7041; Liaoning Prov., Baishilazi Nat. Res., fallen branch of angiosperm, 1995, Dai 2180; Zhejiang Prov., Tianmushan Nat. Res., 2004, Dai 6355. *P. stiptica*, China. Heilongjiang Prov., Fenglin Nat. Res., fallen trunk of *Betula*, 2002, Dai 3701; Inner Mongolia Auto Reg., Baiyinaobao Nat. Res., fallen trunk of *Picea*, 2003, Cui 271; Jilin Prov., Changbaishan Nat. Res., rotten wood of *Abies*, 1993, Dai 876. *P. tephroleuca*, China. Heilongjiang Prov., Fenglin Nat. Res., fallen trunk of *Picea*, 2002, Dai 3727; Sichuan Prov., Jiuzhaigou Nat. Res., rotten wood of *Pinus*, 2002, Dai 4190; Hubei Prov., Houhe Nat. Res., fallen trunk of angiosperm, 2004, Wei 2314. *P.*

undos, China. Jilin Prov., Changbaishan Nat. Res., rotten wood gymnosperm, 1998, Dai 2931, fallen trunk of *Picea*, 2005, Dai 6942, Dai 7105.

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