
A new species of genus *Pseudoclathrus* from Yunnan, China

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Pseudoclathrus yunnanensis sp. nov. found on the ground in Xiaobailong forest in the suburbs of Kunming, Yunnan province, China is described, illustrated and compared with similar taxa. A key to species of *Pseudoclathrus* is provided.

Key words: Basidiomycete, *Pseudoclathrus yunnanensis*, systematics, taxonomy.

Introduction

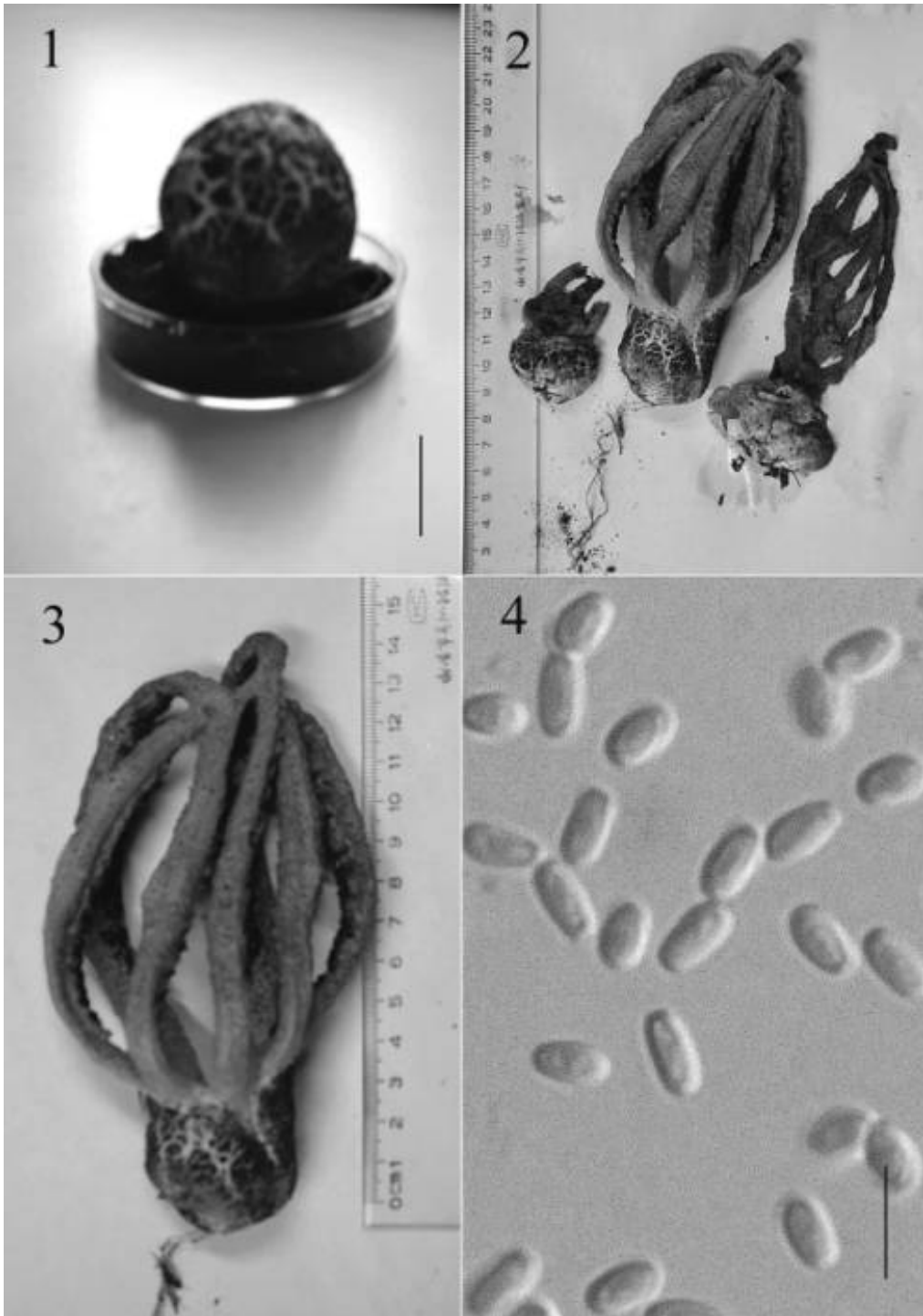
The genus *Pseudoclathrus* was established to accommodate *P. cylindrosporus* B. Liu & Y.S. Bau (Liu, 1980). Three species are presently included in the genus (Zhou and Zhang, 1991). *Pseudoclathrus* is characterized by stipitate basidiocarps, a receptacle formed by erect ramifications (arms or laciniae) of equal diam., united at their apices and cylindrical basidiospores (Liu, 1984).

During a survey of macro-fungi in Yunnan Province, China, an interesting basidiomycete was collected from Xiaobailong forest in the suburbs of Kunming city. After a study of the fungus and a literature survey (Dring, 1980; Liu and Bau, 1980; Liu, 1984; Zhou and Zhang, 1987, 1991; Kirk *et al.*, 2001), we believe this fungus to be hitherto undescribed. We describe the fungus as a new species and compare it with the other species of *Pseudoclathrus*, i.e. *P. cylindrosporus*, *P. leigongshanensis* W. Zhou & K.Q. Zhang and *P. anshunensis* W. Zhou & K.Q. Zhang.

***Pseudoclathrus yunnanensis* W. Zhou & K.Q. Zhang, sp. nov.** (Figs. 1-4)

Fructificatio 12-15 cm alta; *Receptaculum* e sex vel septem brnchiis arcuatis vittiformibus constns, 8-10 cm longum, 0.5-0.8 cm crassus; insulcus exterior longitudinalis in branchio apice connexco, roseus. *Gleba* foetida, fulva. *Stipes* occultus, spongiosus, carneus, cavus, 2.5-3.5 cm longus, 2-2.5 cm crassus. *Volva* vaginiformis, cinereus, 3-4 cm longum, 3-3.5 cm crssus. *Sporae* cylindricae, leavae, hylinae, 2.8-4.5 (3.67) × 1.4-2.2 (1.7) μm.

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Figs. 1-4. *Pseudoclathrus yunnanensis*, from holotype. **1.** Unexpanded basidiocarp. **2-3.** Mature basidiocarps. **4.** Basidiospores. Bars: 1 = 2 cm; 4 = 5 μ m.

Habitat ad terram in sylvis, Mt. Xiaobailong City Kunming, Provincia Yunnan, Sinica, alt. 1900m. 20 XII 2003. K.Q. Zhang et al. Z720 (Typus).

Etymology: referring to yunnanensis, name of the province, southwest of China, indicating that the species was first collected from Yunnan.

Sporocarps 12-15 cm high. Unexpanded *basidiocarps* ovoid or subglobose, smoky-grey, 3-4 cm long, 3-3.5 cm in diam. *Stipe* hidden in the volva, 2.5-3.5 cm long, 2-2.5 cm diam., cylindrical, hollow, pink, spongy in texture. *Receptacle* consists of 6-7 arms in equal diam., 8-10 cm long, 0.7-1.1 cm wide, 0.5-0.7 cm thick, rose-red. A longitudinal furrow does not appear on the outside of each arm. Upper terminals of arms are united and never separated and the arms are thin and cylindrical. *Gleba* confined to the inner side of the arms, olive brown and foetid. *Basidiospores* elliptical to cylindrical, smooth, hyaline, $2.8-4.5 (3.67) \times 1.4-2.2 (1.7) \mu\text{m}$.

Habitat: Growing solitary on the ground in summer.

Holotype: CHINA: Yunnan Province, Kunming, Xiaobailong forest, 20 July 2003, K.Q. Zhang (Z720 typus).

Notes: The new species most closely resembles *Pseudoclathrus leigongshanensis* (Zhou and Zhang, 1987) since it has similar sized basidiospores ($3.9-4.6 \times 1.7-2.6 \mu\text{m}$ vs. $2.8-4.5 \times 1.4-2.2 \mu\text{m}$) and a similar number of arms. The size of sporocarps, the shape of arms united at the apex and the colour of the receptacle are, however, different. In *Pseudoclathrus leigongshanensis* sporocarps are larger (18-20 cm high), the receptacle is cinnamon, arms are banded and united at the apex in a larger square ($5 \times 3 \text{ cm}^2$) and stipe is exposed in the volva. In *Pseudoclathrus yunnanensis* sporocarps are comparatively smaller (12-15 cm high), the receptacle is rose red, arms are thin and cylindrical, and united at the apex without forming a large larger square, while the stipe is hidden in the volva. *Pseudoclathrus yunnanensis* is also comparable to *Pseudoclathrus cylindrosporus* Liu & Bau and *Pseudoclathrus anshunensis* W. Zhou & K.Q. Zhang (Liu and Bau, 1980; Zhou and Zhang, 1991), but can be distinguished by the different shape, colour and number of arms (6 prismic arms, orange-yellow in *Pseudoclathrus cylindrosporus*; 4 cylindrical arms, orange-yellow in *Pseudoclathrus anshunensis* and 6-7 thin cylindrical arms, rose-red in *Pseudoclathrus yunnanensis*).

Key to species of *Pseudoclathrus*

1. Arms prismic, with longitudinal furrows on the outside, gleba forming on two sides of the arms.....*P. cylindrosporus*
1. Arms cylindrical, without longitudinal furrow on outside, gleba forming on the inner side of the arms.....2

2. Receptacle orange-yellow, composed of 4 cylindrical arms, basidiospores $2.5-4 \times 1.2-1.8$ *P. anshunensis*
2. Receptacle cinnamon or rose-red, composed of 6-7 arms 3
3. Receptacle cinnamon, composed of 6 banded arms, which unit at the apex in a large square. Stipe exposed in the volva. Basidiospores $3.9-4.6 \times 1.7-2.6 \mu\text{m}$
..... *P. leigongshanensis*
3. Receptacle rose-red, composed of 6-7 thin cylindrical arms, which do not unit at the apex as a large square. Stipe hidden in the volva, basidiospores $2.8-4.5(3.67) \times 1.4-2.2(1.7) \mu\text{m}$ *P. yunnanensis*

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