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SOME NEW SPECIES AND NEW RECORDS OF DISCOMYCETES IN CHINA. X*

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ABSTRACT: New species of *Lachnum* and *Lambertella* are described in honor of Professor S. C. Teng. *Albotricha longispora* and *Boubovia micholsonii* are reported for the first time from China. A name change is made for fungus previously recorded in China as *Lachnellula fuckelii*.

KEY WORDS: *Albotricha longispora, Boubovia micholsonii, Lachnellula laricis, Lachnum tengii, Lambertella tengii*, taxonomy

Professor S. C. Teng was among the very few pioneer mycologists who worked on discomycetes of China and left Chinese mycology in 1970. Influenced by his eminent works (Teng, 1939, 1963, 1996), our knowledge of the group increased and significant progress has been made. This year is his 100-year anniversary. In memory of Prof. Teng, two new species are described based on his name.

NEW SPECIES

Lachnum tengii W.Y. Zhuang, sp. nov. Figs. 1~5

邓氏粒毛盘菌 图 1~5

Ab *Lachno pygmaeo* differt ascosporis ellipsoideis, uniseriatis, brevibus, 5~7.5 × 1.9~2.7 μm; ascis brevibus, 49~55 × 3.5~4.5 μm; apotheciis albis, seminicolis.

Apothecia 1~3 in a group on seeds, discoid, 1~2 mm in diam., long-stipitate; stipe subcylindrical with very base slightly swollen, light brown at upper portion and dark brown at base when dry, 4~14 mm long, surface with short hairs and appearing downy, the very base covered with white hairs; hymenium surface white when fresh and light brown when dry; receptacle concolorous, surface slightly downy due to presence of short hairs. Hairs subcylindrical, hyaline, 0~2-septate, finely granulate throughout, walls 0.5~1 μm thick, 10~30 × 3~5 μm including granules; granules scattered and not densely distributed on hair surface. Ectal excipulum of textura prismatica, 17~30 μm thick; cells subhyaline, somewhat thick-walled, 9~15 × 4.5~6 μm; cells at very base of the stipe seemingly pigmented. Medullary excipulum of textura intricata, 15~75 μm thick; hyphae hyaline, 2~3 μm wide. Hymenium 57~70 μm thick. Asci subcylindrical, 8-spored, J+ in Melzer's reagent without KOH pretreatment, pore walls slightly blue as two lines, mostly 49~55 × 3.5~4.5 μm. Ascospores ellipsoid with the upper end very slightly wider, unicellular, eguttulate, mostly uniseriate, 5~7.5 × 1.9~2.7 μm. Paraphyses

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lanceolate, 2~3-septate, 2~4 μm wide at the upper portion, protruding beyond the asci by ca 10 μm.

Holotype: On fallen seeds (small nuts) of an unidentified plant, Huanglongtan, Lushan, Jiangxi, China, 20 X 1996, Z. Wang & W.Y. Zhuang 1471, HMAS 82047.

Etymology: The specific epithet is in honor of Professor S. C. Teng for his life contribution to mycology in China and his 100 year anniversary.

Notes: In the field notes, the fungus was first marked as a possible species of *Hymenoscyphus* Gray. Obviously, the short hyphal protrusions scattered on surface of receptacle and of stipe were either not detectable with the hand lens or overlooked. Upon examination, the combination of very long apothecial stipes, presence of pigmented cells at stipe base, ellipsoid and uniseriate ascospores within the subcylindrical asci, and occurrence on small nuts makes one think of members in the Rutstroemiaceae (Holst-Jensen *et al.*, 1997). Under the microscope, short hyphal protrusions or hairs are distributed evenly on the entire surface of receptacle and stipe and are obviously granulate. The hair granules are very similar to those of *Lachnum* in the Hyaloscyphaceae (Haines & Dumont, 1984; Dennis, 1978) except for their more or less loose distribution on hair surface. The paraphyses are lanceolate, which is also *Lachnum*-like as well as is the excipular structure. *Lachnum* is finally chosen to accommodate the fungus.

In the genus *Lachnum*, *L. pygmaeum* (Fr.) Bres. characterized by the long-stipitate apothecia and very short hairs on receptacle and stipe (Dennis, 1949; Spooner, 1987) is the most similar species to the collection from Lushan. The former differs in light yellow apothecia on roots instead of on seeds; longer asci (60~75 × 4.5~6 μm) with apical pore deep blue in iodine solution instead of faintly blue; longer [7~10(~12) × 1.5~2.4 μm] and cylindric-fusoid to narrowly fusoid ascospores biseriate or obliquely uniseriate below; longer ectal excipular cells (10~)15~30 × 4~7 μm; and much thicker medullary excipulum (up to 500 μm *vs.* 15~70 μm thick). The above distinctions are treated at the species level and a new species is described and named as *L. tengii*.

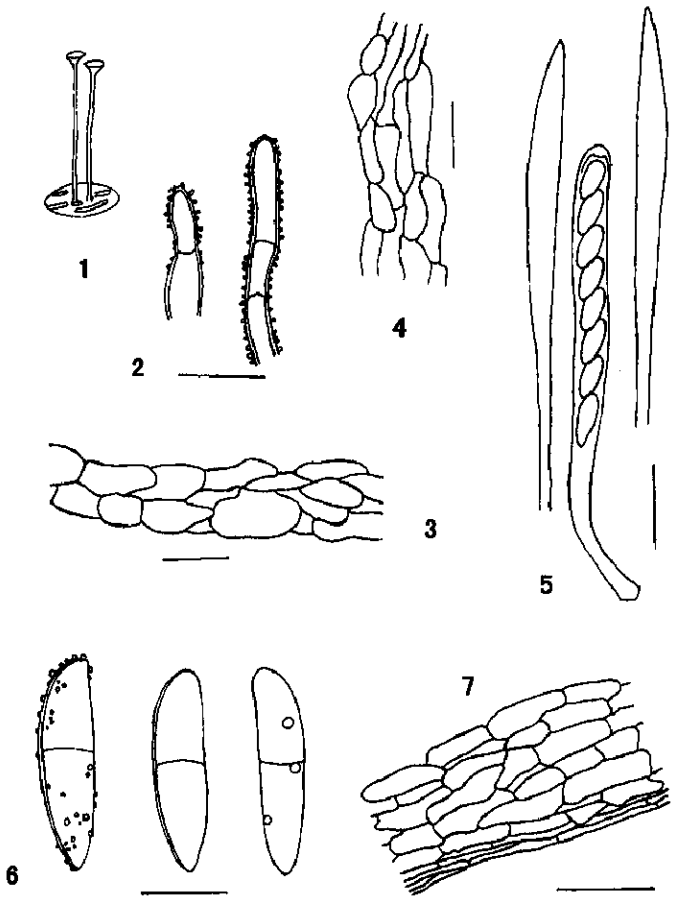
Lambertella tengii W.Y. Zhuang, sp. nov. Figs. 6~7

邓氏兰伯特盘菌 新种 图 6~7

Ab *Lambertella caudatoides* ascosporis uniseptatis, angustis, verrucosis irregulariter, 23~26 × 5.2~6.5 μm differt.

Apothecia discoid, 0.4~1.6 mm diam, stipitate, hymenium surface light yellow to dirty white, receptacle lighter, stipe base dark; ectal excipulum of two layers, outer covering layer with 2~3 hyphal layers, inner layer of textura prismatica, 18~35 μm thick, cells hyaline, thin-walled; medullary excipulum of textura intricata, 50~130 μm thick, hyphae hyaline, thin walled, 1.5~2 μm wide; asci clavate to cylindric-clavate, conical with a rounded end at apex, pore walls blue in Melzer's reagent, 104~120 × 9~11.8 μm; ascospores scutuloid to fusoid, 0~1-septate, septum developed while still within ascus, hyaline and multiguttulate when young, light brown at maturity, slightly banded at the convex side, surface smooth when young, becoming roughened or covered with unevenly distributed, reddish brown, resinous, rounded warts of different sizes, irregularly biseriate to irregularly uniseriate, 19~25 × 4~5 μm when hyaline, 23~26 × 5.2~6.5 μm after becoming brown; paraphyses filiform, 1.5~2 μm wide.

Etymology: The specific epithet is in honor of Professor S. C. Teng.



Figs. 1~5. *Lachnum tengii* (HMAS 82047): 1. Schematic drawing of apothecia on substrate. 2. Two hairs. 3. Excipular structure at flank. 4. Structure of stipe near apothecial base. 5. Ascus with ascospores and paraphyses. Scale bars: 2, 5 = 10 μm; 3, 4 = 20 μm

Figs. 6~7. *Lambertella tengii*: 6. Ascospores (HMAS 82043). 7. Ectal excipular structure (HMAS 82044). Scale bars: 6 = 10 μm; 7 = 20 μm

Holotype: On small ?fern rachis, Huangshan, Anhui, alt. 1300~1700 m, 27 IX 1993, Y.R. Lin, Y. Wang, W.Y. Zhuang, S.M. Yu & W.J. Wu 1109, HMAS 82043. Paratype: On herbaceous stem, *ibid.*, Y.R. Lin, Y. Wang, W.Y. Zhuang, S.M. Yu & W.J. Wu 1121, HMAS 82044.

Notes: In the genus *Lambertella* Höhn., two species, *L. caudatoides* W.Y. Zhuang and *L. torquata* W.Y. Zhuang, possess scutuloid ascospores (Zhuang, 1995, 1999), which share similar spore shape with the Huangshan collections. *Lambertella tengii* is similar to *L. caudatoides* in the size of asci and of ascospores but different from the latter in color of hymenium surface, pigmentation at stipe base, uniseptate ascospores with unevenly distributed, reddish brown, rounded, resinous warts on surface instead of aseptate and smooth-walled spores, and occurrence on fern rachis or herbaceous stems instead of on leaf blade. *L. verrucosispora* W.Y. Zhuang on stromatized petioles was the only species of the genus with warted ascospores but differs significantly in

morphology of asci and ascospores and color of apothecia (Zhuang, 1990).

NEW RECORDS FOR CHINA

Albotricha longispora Raitv., Folia Cryptog. Estonica Fasc. 2: 15, 1973. 长孢白毛盘菌

Apothecia discoid, 1~2 mm diam when dry, stipitate, hymenium surface yellow when dry, receptacle covered with white hairs; hairs aciculate, hyaline, septate, smooth-walled, 60~140 μm long, 2.5~3 μm wide at base and 1.5~2 μm at apex; ectal excipulum of textura prismatica, 70~85 μm thick, cells hyaline, thin-walled; medullary of textura intricata, 65~200 μm thick; hymenium 90~100 μm thick; asci cylindric-clavate, 8-spored, 55~75 × 4~5.5 μm; ascospores rod-shaped to cylindric-fusoid, with several tiny guttules, irregularly biseriate, 9~14.5 × 1.4~1.8 μm; paraphyses lanceolate, 2~4 μm at the widest, protruding beyond the asci by 15~20 μm.

Specimen examined: on rotten culm of a grass, Luhuo, Sichuan, alt. 3200 m, 4 IX 1997, Z. Wang 2206, HMAS 75906.

Notes: HMAS 75906 differs slightly from the holotype material of *Albotricha longispora* collected in New York State, USA in the larger apothecia (1~2 mm diam when dry *vs.* 0.5~1 mm diam) with a longer stipe (stipitate *vs.* subsessile to short-stipitate) and slightly narrower hairs (2.5~3 μm excluding markings *vs.* 4~4.6 μm wide) (Raitviir, 1973).

Boubovia micholsonii (Massee) Spooner & Y.J. Yao, Mycol. Res. 100: 194, 1996. 米氏布博维盘菌

Apothecia pulvinate, sessile, 0.7~1 mm in diam, hymenium light dirty yellow-orange, receptacle slightly lighter; ectal excipulum of textura angularis to textura globulosa, outside slightly pustulate, 18~38 μm thick, cells more or less isodiametric, 6~25 μm in diam; medullary excipulum of textura intricata, 70~230 μm thick at flanks, hyphae hyaline, 2~3 μm wide; hymenium ca 110~115 μm thick; asci cylindric-clavate, 8-spored, J– in Melzer's reagent, ca 110 × 9~10 μm; ascospores ellipsoid, unicellular, hyaline, some with a de Bary babble, thick-walled when young, 10~11.7 × (5.8~)6~6.7(~7) μm; paraphyses filiform, strongly curved at apex, branched, septate, 1~1.5 μm wide.

Specimen examined: On small rotten twig, Tanzhesi, Beijing, 7 VIII 2001, Z.H. Yu, X.M. Zhang, Y.H. Zhang & W.Y. Zhuang 4021, HMAS 81398.

Notes: This is a new record for China.

PREVIOUSLY RECORDED SPECIES FROM CHINA FOR WHICH A NAME CHANGE IS REQUIRED

Lachnellula laricis (Cooke) Dharne, Phytopathol. Z. 53: 132, 1965. 落叶松长生盘菌

Diagnostic features: Apothecia discoid, 0.5~2 mm diam when dry, stipitate, hymenium surface yellow, receptacle whitish, hairy; hairs subcylindrical, granulate, hyaline, septate, 20~100 × 1.5~3 μm excluding the markings; ectal excipulum of textura angularis to textura prismatica, 20~55 μm thick; medullary excipulum of textura intricata, 40~190 μm thick; hymenium 110~130 μm thick; subhymenium 7~10 μm thick; asci 8-spored, cylindric-clavate, J+ in Melzer's reagent, 95~110 × 8~10 μm; ascospores ellipsoid, uniseriate, without obvious guttules, 11~14.5 × 5.8~7.5 μm; paraphyses filiform to narrowly lanceolate, 1.5~2 μm wide, exceeding the asci by 15~25 μm.

Specimens examined: On rotten twigs of conifers, Antu, Jilin, alt. 2000 m, 31 VII 1960, Y.C. Yang *et al.* 492,

493, HMAS 29383, 32094.

Notes: According to Dharne (1965), *Lachnum fuckelii* (Bres.) Dharne is distinguished from *L. laricis* in the negative iodine reaction of ascus pore, slightly narrower ascospores (10~15 × 4.5~6 μm *vs.* 12~16 × 6.5~7.7 μm), and shorter asci (88~95 × 7~7.5 μm *vs.* 100~130 × 6.5~7.7 μm). The fungus previously recorded in China as *Dasyscyphus fuckelii* (Bres.) Velen. [≡ *Lachnellula fuckelii*] was based on collections on twigs of *Abies* and other conifers from Jilin Province (Teng, 1963), which possesses asci with positive iodine reaction and 95~110 × 8~10 μm and ascospores 11~14.5 × 5.8~7.5 μm. The above morphological characteristics indicate that the correct name for the Chinese fungus should be *L. laricis*.

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中国盘菌新种和新记录之十

庄文颖

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摘 要：以我国已故著名菌物学家邓叔群先生的名字命名的粒毛盘菌属和兰伯特盘菌属新种各一个，即邓氏粒毛盘菌 *Lachnum tengii* 和邓氏兰伯特盘菌 *Lambertella tengii* 被描述；我国新记录种两个，即长孢白毛盘菌 *Albotricha longispora* 和米氏布博维盘菌 *Boubovia micholsonii* 被报道；同时对我国历史上记载为 *Lachnellula fuckelii* 的真菌的分类地位进行了讨论和订正。

关键词：长孢白毛盘菌，米氏布博维盘菌，落叶松长生盘菌，邓氏粒毛盘菌，邓氏兰伯特盘菌，分类学

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