

我国西藏担子菌类数新种

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西藏的东南隅是真菌区系极为丰富和复杂的一个地区。作者在此地区采到的 910 号真菌标本, 经鉴定有担子菌类 5 个新种, 即: 牛肝菌科 (Boletaceae) 的木生小牛肝菌 (*Boletinus lignicolus* Zang sp. nov.), 巨孢牛肝菌 (*Boletus magasporus* Zang sp. nov.), 喇叭菌科 (Cantharellaceae) 的疣孢鸡油菌 (*Cantharellus tuberculosporus* Zang sp. nov.), 灰包科 (马勃科) (Lycoperdaceae) 的纺锤形灰包 (*Lycoperdon fusiforme* Zang sp. nov.) 和鸟巢菌科 (Nidulariaceae) 的盘状黑蛋巢 (*Cyathus discoideus* Zang sp. nov.)。

木生小牛肝菌 新种

(*Boletinus lignicolus* Zang sp. nov.)

菌盖宽 4—7 厘米, 中央凸突, 渐呈垫状而平展, 干, 密复微细绒毛, 后期盖表多呈微形破裂。初赭—褐色, 盖缘渐近栗—褐色, 后期呈浅黄褐色—褐色或肉桂色。菌柄长 3.5—5 厘米, 粗 1—1.5 厘米, 圆柱形、近圆柱形, 等粗或上部渐细。菌柄上端浅黄色, 黄色或金黄色; 基部呈黄—褐色, 光滑。环带模糊不明显。菌丝黄色, 盖部菌肉厚达 4—12 毫米, 白色, 微黄色, 伤后变淡蓝色。菌管 0.2—1 × 3—7 毫米, 辐射状排列, 菌管顺菌柄而下延, 黄色, 后期呈橄榄色; 孔口 0.2—0.8 × 1.2—2 毫米。同色。担孢子 4.9—6.2 × 12—14.8 微米, 微黄而透明, 椭圆形, 光滑, 内具 1—2 个油滴。侧生囊状体 10—14 × 25—30 微米, 棒状。褶缘囊状体未见。无气味。(见图版 I-1, 图 1-(1), (2))

生于高山松 (*Pinus densata* Mast.) 的树干和倒腐木上。

西藏: 米林县, 巴嘎, 28. VII. 1975, 臧穆 0408。[模式标本存昆明植物研究所

标本室 (HKAS 5408)]

本种与松林小牛肝菌 *Boletinus punctatipes* Snell et Dick 较为近似^[1], 但菌柄光滑, 担孢子较大 (4.9—6.2 × 12—14.8 微米), 且为树干生; 生于高山松林带。

Boletinus lignicolus Zang sp. nov.

(Pl. I: 1; I: 1—2)

Pileus 4—7 cm. convexus, dein pulvinato-expansus, in sicco minute villosotomentosus, dein minute cutifRACTUS, primo umbrinobadius, marginem versus castaneo-badius, aetate cervino-brunneus vel subcinnamomeus. Stipes 1—1.5 cm. × 3.5—5 cm. cylindricus, subcylindricus, aequalis vel sursum attenuatus, apice luride flavus vel aurantiacus, basim versus levis fulvo-brunneus. Annulus indistinctus. Mycelio flavo. Caro 4—12 mm. crassa, alba vel flavidula, in pileo pallide cyanescens. Tubuli 0.2—1 × 3—7 mm. decurrentes radiantes, flavi dein olivacei; poris 0.2—

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0.8 × 1.2—2 mm., concoloribus. Basidiosporae 4.9—6.2 × 12—14.8 μm., flavescendo-hyalinae. ellipsoideae, laeves, 1—2 guttatae. Pleurocystidia 10—14 × 25—30 μm., clavata. Cheilocystidia non videntur. Odor nullus.

Hab. In corticem et ligno Pinetis densatae.

Xizang (Thibet): Mi-lin, Ba-ga. 28, VII. 1975. Zang Mu 0408. Typus! (in HKAS 5408).

巨孢牛肝菌 新种

(*Boletus magasporus* Zang sp. nov.)

菌盖宽 3.5—7 厘米, 中央凸突, 干, 光滑, 桃红色, 后期呈淡鲜红色。菌柄高 6—11 厘米, 粗 1.2—2 厘米, 圆柱形, 光滑, 有纵长条纹, 基部渐近红色或红—紫色。菌肉白色, 伤后不变色。菌管长 0.7—1.2 厘米, 凹生或弯曲凹生, 菌管层中央部分呈腹鼓状, 近柄处微呈直生状而下延。菌管黄色, 伤后呈现蓝色。担孢子近纺锤状, 光滑, 7—8.5 × 18—20 微米, 透明而微黄。担子具 4 个孢子。侧生囊状体 9—15 × 25—46 微米, 圆柱形或纺锤形。褶缘囊状体未见。无特殊气味, 嚼有苦味。(见图版 I-2, 图 1-(3), (4))

生于林地上, 海拔 2000—2700 米。

西藏: 察隅, 海拔 1900 米, 云南松 (*Pinus yunnanensis* Fr.) 和高山松 (*Pinus densata* Mast.) 林下。3. IX. 1976. 减穆 930。

云南: 高黎贡山, 波拉箐, 生于台湾柏 (*Taiwania flousiana* Gauss.) 林下。7. VII. 1978. 减穆 03963 [模式标本。(HKAS 3963)]; 高黎贡山, 皮拉, 丛林中, 海拔 2700 米。12 VII. 1978. 减穆 04060; 碧江, 竹林下, 海拔 2100 米。9. VII. 1978. 减穆

4038。

本种近似胭脂牛肝菌 *Boletus puniceus* Chiu^[2], 但菌柄光滑, 手抚摸后, 犹有此感。担孢子明显较大 (7—8.5 × 18—20 微米), 肉有苦味。仅见于藏东南和云南境内怒江河谷的潮湿林下。

Boletus magasporus Zang sp. nov.

(Pl. I:2; I:3—4)

Pileus 3.5—7 cm. latus, convexus, siccus, glaber, persicinus. subrubellus, demum pallide coccineus. Stipes 1.2—2 cm. crassus, 6—11 cm. longus, cylindricus, laevigatus et striatus, attenuatus, non-reticulatus, apice pallidus vel subrubellus, basim versus rubellus vel rubro-purpureus. Caro alba immutabilis. Tubuli 0.7—1.2 cm. longi, adnexi vel sinuato-adnexi, subventricosi et adnato-decurrentes. Pori lutei post tactum caerulescentes. Basidiosporae subfuscoideae, laeves. 7—8.5 × 18—20 μm., hyalino-flavidae. Basidia 4-sporigera. Pleurocystidia 9—15 × 25—46 μm., cylindricae vel fusiformia. Cheilocystidia non videntur. Odor nullus et sapor amarus.

Habitat in sylvis montium usque ad 2000—2700 m. alt.

Xizang (Thibet): Zayü, alt. 1900 m. In Pinetis yunnanensis et Pinetis densatae. 3, IX. 1976. Zang Mu 930.

Yunnan: Bo-la-jing, Caoligong shan, in silvis Taiwanicae flousianae Gauss. alt. 2200 m., 7, VII. 1978. Zang Mu 03963 Typus! (HKAS. 3963); Pi-la, Gaoligong shan. In dumosis collium. alt. 2400 m. 12, VII. 1978. Zang Mu 04060; Bijiang, In Bambusae. alt. 2100 m., 9, VII. 1978. Zang Mu 4038.

疣孢鸡油菌 新种

(Cantharellus tuberculosporus Zang sp. nov.)

菌盖宽4—8.5厘米,平凹,后期呈漏斗形。明亮黄色,金黄-黄色或金黄色,光滑。盖缘薄而内卷。菌柄高2—4厘米,宽1—3厘米,圆柱形,向上渐粗,向下渐细,同色。基部由白—黄色菌丝组成毛绒状物。褶片下延,呈不规则1—2次叉分,褶间有横脉,淡黄色或金黄色。担孢子5—6 × 7—8.5微米,透明,椭圆形,外表具疣。担子棒状,7—9 × 18—22微米。气味香美,口尝无特殊滋味。(见图版 I-3, 图 1-(5),(6))

生于林下,尤以假高山栎 (*Quercus pseudosemicarpifolia* A. Gamus) 林下为普遍。

西藏: 米林县,巴嘎。28. VII. 1975. 减穆 412. [模式标本。(HKAS 5412)]

本种近似云南鸡油菌 *Cantharellus yunnanensis* Chiu^[3], 但菌体较大, 菌盖和子实层均呈明亮黄色, 担孢子外表具疣突。

Cantharellus tuberculosporus

Zang sp. nov. (Pl. I:3; I:5—6)

Pileus 4—8.5 cm. latus, depressus dein infundibuliformis. laete flavus, aurantiofulvus vel aurantiacus, laevigatus, margine tenui recurvo. Stipes 2—4 × 1—3 cm. cylindricus. laevigatus, sursum inerassatus, concolor, basim versus attenuatus, basi mycelio albo-flavescente villosus. Lamellae decurrentes irregulariter 1—2 dichotomae anastomosantes, pallide flavae vel aurantiacae. Basidiosporae 5—6 × 7—8.6 μm., hyalinae, ellipsoideae, tuberculosae. Basidia clavata. 7—9 × 18—22 μm. Odor gratus et sapor subnullus.

Hab. In sylvis praecipue Quercinis

pseudosemicarpifolio.

Xizang (Thibet): Mi-Lin, Ba-ga, 28, VII. 1975. Zang Mu 412. Typus! (HKAS. 5412).

纺锤状灰包 新种

(Lycoperdon fusiforme Zang sp. nov.)

担子果纺锤形或圆柱形,有时呈陀螺状,7—22毫米高,中部4—15.5毫米宽。外包被初期白色,顶尖部淡褐色,淡黄褐色,后期赭黄色或烟煤色,外被糠麸状纤细颗粒——疣状突起。成熟时顶端开裂,口不规则。内包被柔而薄,赭黄色。造孢组织橄榄色,污褐色。基部无隔膜。孢丝粗6—8.7微米,分枝,褐色,有横隔。拟孢丝黄褐色,分枝,粗3.7—5微米,壁上具多数小孔,无横隔。担孢子,小,近球形和多角卵形,橄榄褐色,光滑或微有疣状突起,直径2.4—3.7微米,内具1—2个油滴。散生,有易脱落的短柄。[见图版 I-4, 图 1-(7)–(9)]

生于岩石表面的苔藓丛中。

西藏: 三安曲林,陇站。14, VII. 1975. 减穆 224. [模式标本, (HKAS 5224)]

本种近似藓生灰包 *Lycoperdon muscorum* Morgan^[4], 但担子果呈明显纺锤形, 担孢子较小, 直径2.4—3.7微米。

Lycoperdon fusiforme Zang sp.

nov. (Pl. I:4; I:7—9)

Basidiocarpa fusiformis, cylindrica, usque turbinata, 7—22 mm. longa, 4—15.5 mm. diam. in medio. apice dehescens, ad maturitatem, ore irregulari. Exoperidium initio album, apice fusidulum, fulvidum, demum ochraceum vel fumiginosum, furfuraceum. subtiliter granuloso-verrucosum. Endoperidium tenue ochraceum. Gleba olivacea, fuscescens, basi non

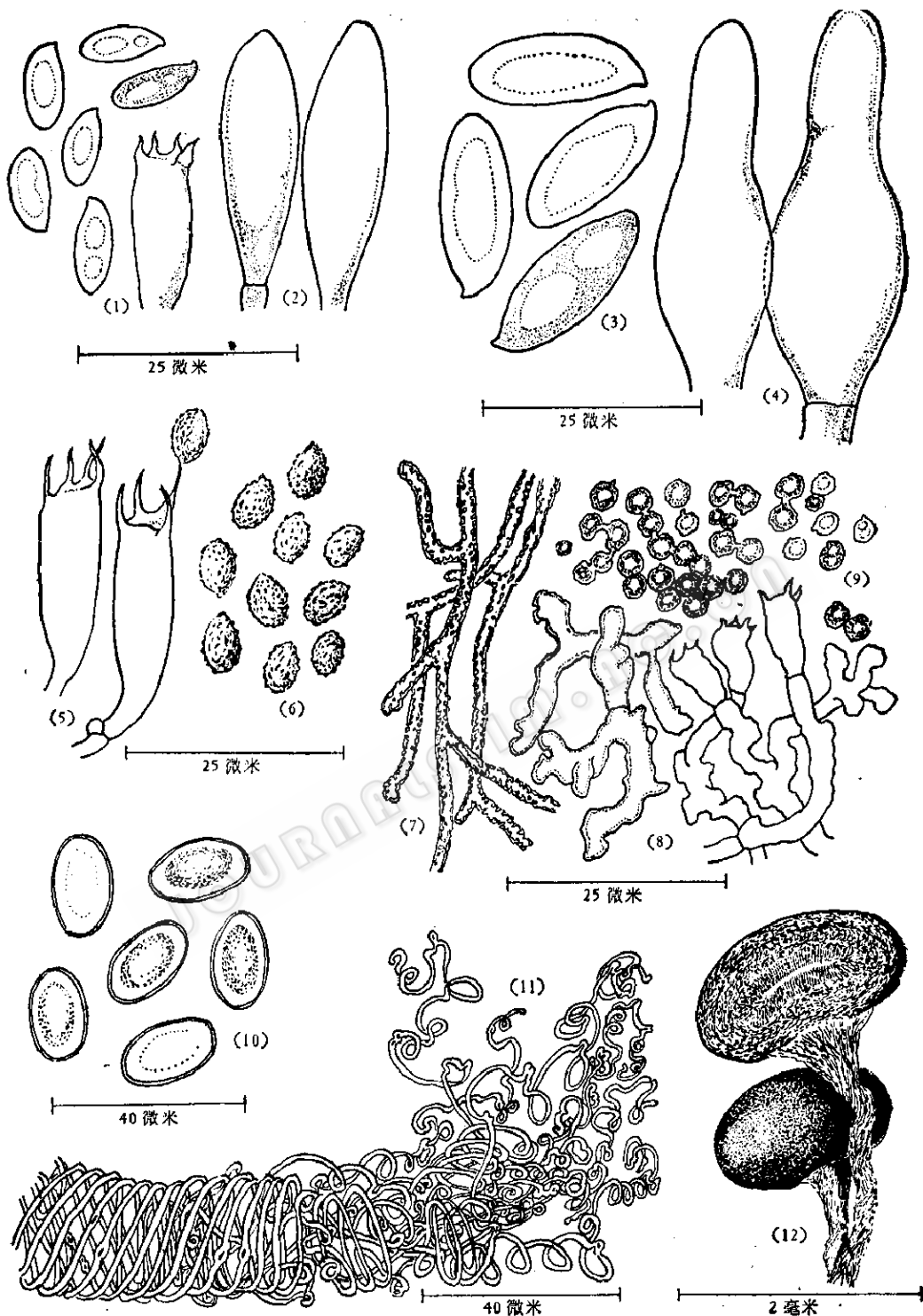


图1 我国西藏担子菌类新种

木生小牛肝菌 *Boletinus lignicolus* M. Zang (1) 担孢子和担子; (2) 侧生囊状体;
 巨孢牛肝菌 *Boletus magasporus* M. Zang (3) 担孢子; (4) 侧生囊状体;
 疣孢鸡油菌 *Cantharellus tuberculosporus* M. Zang (5) 担子; (6) 担孢子;
 纺锤形灰包 *Lycoperdon fusiforme* M. Zang (7) 拟抱丝; (8) 抱丝; (9) 担孢子和担子;
 盘状黑蛋巢 *Cyathus discoideus* M. Zang (10) 担孢子; (11) 小包索状体的菌丝; (12) 小包。

sepimento. Capillitium usque 6—8.7 μm . latum. ramulosum, brunneum, septatum. Paracapillitium luteo-brunneum, 3.7—5 μm ., poris minimis multis provisum, ramosum, non septatum. Basidiosporae minutae, subglobosae, subangulato-ovatae, olivaceo-brunneae, laeves vel subtiliter verrucosae, 2.4—3.7 μm . diam. 1—2 guttae, sparsae, reliquiis sterigmatorum intermixtae.

Hab. Ad saxa, saepe cum aliis muscisque.

Xizang (Thibet): Sangngagqoiling, Long-Zhan, 14, VII. 1975. Zang Mu 224. Typus! (HKAS 5224).

盘状黑蛋巢 新种

(*Cyathus discoideus* Zang sp. nov.)

包被三层, 具柄, 初期呈陀螺形, 后期呈倒球果状, 倒钟状或杯状。口径宽 6—11 毫米, 高 15—20 毫米, 外侧具微细匍匐状毛绒, 深褐色或黑色; 内侧乌黑色, 具稀疏而明显的黑色褶纹, 下部呈吸盘状。盖膜淡褐色, 薄; 小包多数, 3—7 个, 每个径约 0.6—1 $\times$ 1.5—2 毫米, 肾脏形。小包薄膜呈黑色。小包皮层单层。索状体的菌丝呈螺旋状扭曲。担孢子透明, 近卵形或长椭圆形, 两端钝圆, 长 17—19 微米, 宽 10—11.5 微米, 内具 1—2 个油滴。(见图版 I-5, 图 1-(10)—(12))

生于倒木上。

西藏: 察隅, 海拔 2400 米。5, IX. 1976. 减穆 743 [模式标本, (HKAS 5743)]

本种显著的特点是担子果具有盘状基

部的柄。因此与其相近种壶黑蛋巢菌 *Cyathus olla* (Batsch) Pers. 和本属其他种均不同^[5, 6]。

Cyathus discoideus Zang sp. nov.

(Pl. I: 5; I: 10—12)

Peridium tri-stratum, stipitatum, primo turbinatum, dein obconicum, obcampanulatum vel cyathiforme. ore 6—11 mm. lato, 15—20 mm. altum; extus minute depresso tomentum, brunneum vel nigricatum; intus coracinum, tenuiter sed distincte nigrito-striatum, inferne discoideum. Epiphragma brunnesco-pallidum, tenue; peridiola plura, 3—7. unusquisque ca. 0.6—1 $\times$ 1.5—2 mm. diametro, reniformia. tunica nigra ferentia; cortex simplex. Hapae funiculi spirales. Basidiosporae hyalinae, ovideae vel ellipsoideae, obtusae, 17—19 μm . longae, 10—11.5 μm . latae. 1—2 guttulae.

Habitus: In ligno carioso.

Xizang (Thibet): Zayü, alt. 2400 m. 5, IX. 1976. Zang Mu 743. Typus! (HKAS. 5743).

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SOME NEW SPECIES OF BASIDIOMYCETES FROM THE XIZANG AUTONOMOUS REGION OF CHINA

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The mycoflora of the southeastern area of Tibet is very rich and complex. Among the many fungous specimens collected by the author during his investigations to this region, five new species of Basidiomycetes are identified:

1. *Boletinus lignicolus* Zang: Closely related to *Boletinus punctatipes* Snell et Dick, but differs from which in its glabrous stipe, larger basidiospores ($4.9-6.2 \times 12-14.8 \mu\text{m}$) and its lignicolous habitat, especially the parasitism on *Pinus densata* Mast.

2. *Boletus magasporus* Zang: Found in swampy forests. Distribution of this species seems to be limited to the both sides of Nuchiang River in Yunnan Province and the southeastern region of Tibet. It resembles *Boletus puniceus* Chiu in appearances, but differs in that the stipe of the new species is smooth,

basidiospores larger ($7-8.5 \times 18-20 \mu\text{m}$) and tastes bitterish.

3. *Cantharellus tuberculosporus* Zang: Characterized by its larger size of basidiocarp, the bright yellow color of pileus and hymenophore, and the tuberculation of spores, which distinguish this new species immediately from *Cantharellus yunnanensis* Chiu.

4. *Lycoperdon fusiforme* Zang: Closely related to *Lycoperdon muscorum* Morg., differs from which in its spindle-shaped basidiocarp and its smaller basidiospores ($2.4-3.7 \mu\text{m}$ in diameter).

5. *Cyathus discoideus* Zang: Remarkable for the fact that the stipe of its basidiocarp possesses a disc-like base which discriminates this species from *Cyathus olla* (Batsch) Pers. as well as other species in the same genus.