

SQUAMANITA, A NEW RECORD TO CHINA

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*(Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204)***菌瘿伞属, 中国的一个新记录属**

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Squamanita Imbach, Mitt. Naturf. Ges. Luzern 15: 81, 1946; Bas, Persoonia 3: 333, 1965; Singer, Agar. Mod. Tax. 2nd edn. 242, 1962; Singer, Agar. Mod. Tax. 4nd edn. 507, 1986. — Type: *Squamanita schreieri* Imbach.

Fruit-bodies stipitate, tricholomatoid, growing on fungal gall (cecidio carp). Pileus often covered by squamules; lamellae more or less adnate (from emarginate-adnexed or sinuate to subdecurrent). Spore print white or whitish. Hymenophoral trama regular; spores small to medium-sized, ellipsoid to subglobose, hyaline or subhyaline, inamyloid or weakly pseudoamyloid or amyloid, without germ-pore; basidia without siderophilous granulation, mostly 4-spored; cystidia sometimes present; hyphae with clamp connections. Cecidio carp more or less strongly differentiated.

Squamanita umbonata (Sumst.) Bas, Persoonia 6: 335, fig. 1-4, 1965

Armillaria umbonata (Sumst.) Murrill, North Amer. Fl. 10: 38, 1914

Vaginata umbonata Sumst., Mycologia 6: 35, pl. 117/fig. 1, 1914

Fruit-bodies solitary to caespitose. Pileus 3-5 cm in diam., subconical to convex, center with a distinct umbo, margin incurved at first, sometimes revolute with age; pileal surface dry, dirty white, grayish or brownish, densely covered with brown to yellow-brown or dark brown, more or less radially arranged, repent, fibrillose squamules. Lamellae white, adnexed to adnate, moderately crowded. Stipe 3-6.5 × 0.6-1.5 cm, subcylindrical, surface whitish, densely covered with brown, dark brown to yellowish brown, repent or reflexed squamules. Cecidio carp subglobose to napiform, 3.5-4.5 × 1.5-3.5 cm. Transitional zone between stem and cecidio carp covered with yellow-brown to dark brown fibrillose, appressed or erect, obliquely upward-pointing scales or lacerate scales arranged as irregular rings. Context of pileus and stipe white, odor indistinct. Context of cecidio carp pale grayish, lower parts often pale brownish or with pinkish tinge, odor somewhat unpleasant.

Spores (5.5) 6.0-8.5 (9.0) × 4.0-5.0 (6.0) μm [Q = (1.30) 1.35-1.80 (1.90), Q = 1.55 ± 0.15], ellipsoid, sometimes subreniform in side view, thin-walled, hyaline, inamyloid, reddish in Congo Red, not metachromatic in Cresyl Blue. Basidia 27-36 × 7-13 μm, subclavate, 4-spored, rarely 1-, 2-, or 3-spored. Pleurocystidia numerous, 58-130 × 12-28 μm, fusiform to ventricose-fusiform, with obtuse to acute apex,

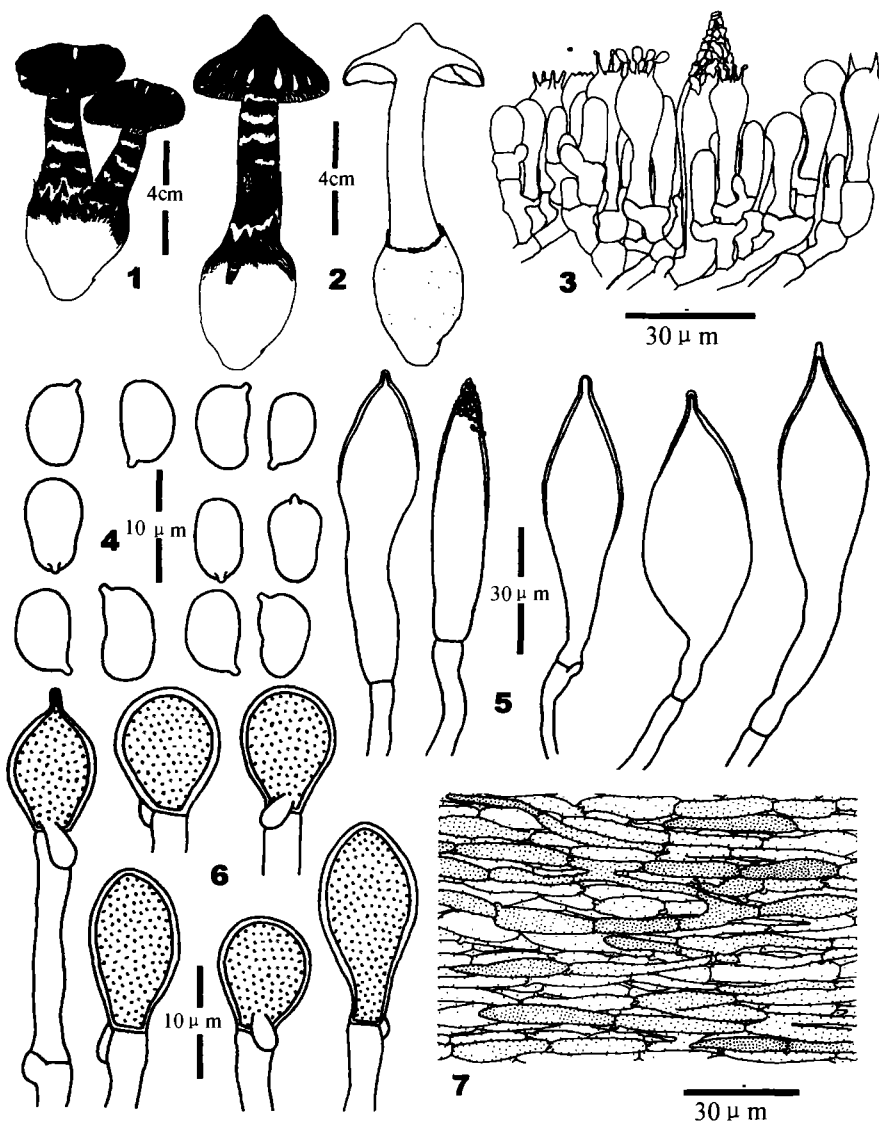


Fig. 1 *Squamanita umbonata*.

1 HKAS 38127, Habit. 2-7, HKAS 38149. 2, Habit; 3, Subhymenium and hymenium with pleurocystidium covered with refractive incrustations; 4, basidiospores; 5, pleurocystidia sometimes covered with refractive incrustations; 6, chlamydospores in cecidiocarp; 7, structure of squamule on pileus

upper part slightly thick-walled to moderately thick-walled, sometimes with refractive incrustations, solitary, hyaline. Cheilocystidia abundant, similar to pleurocystidia but somewhat slender. Trama of gills regular, composed of hardly inflated hyphae or inflated cells, 4-14 μm wide just below subhymenium, 20-35 (40) μm wide in the middle trama. Subhymenium densely ramose, narrow. Squamules on pileus, stem, and the transitional zone between stem and cecidiocarp composed of somewhat inflated, thin to slightly thick-walled

cells (12-140 × 11-25 μm), most with yellow-brown to brown, vacuolar pigment. Chlamydozoospores common in the cecidiocarp of HKAS 38149, broadly clavate, ovoid to subglobose, 9.5-19 × 6.5-9.5 μm, yellow-brown, but not observed in the cecidiocarp of HKAS 38127. Sphaerocysts common in the cuticle of the cecidiocarp of HKAS 38127, subglobose, 25-65 × 20-60 μm, thin walled, mostly with yellow-brown to brown, vacuolar pigment, but not observed in the cuticle of the cecidiocarp of HKAS 38149. Clamp connections common in fruitbody.

Specimens examined: Hunan Prov.: Changsha County, Fulin, 12. VI. 2001, Z. L. Yang 3049 (HKAS 38127); Yizhang County, Mangshan Yazishi, alt. 1500 m, 17. VI. 2001, Z. L. Yang 3071 (HKAS 38149). Growing on fungal gall in woods of *Pinus kwangtungensis* Chun ex Tsiang and *Lithocarpus* sp.

Distr.: North America, Europe and Asia. New to China.

REMARKS: *Squamanita umbonata* is well characterized by its umbonate pileus, irregular rings of scales on the transitional zone between stem and cecidiocarp, and fusiform to ventricose pleuro- and cheilocystidia with moderately thickened wall sometimes covered with refractive incrustations.

According to Sumstine (1914), the type of this species has a "long bulbous root". Bas (1965) stated that this species is "arising from a cylindrical to clavate fusiform bulb which measures 30-70 × 24-40 mm". The so-called "bulbous root" or "bulb" was named "cecidiocarp" by Bas & Thoen (1998). The two collections made from China bear subglobose to napiform cecidiocarps. Numerous chlamydozoospores in the cecidiocarp of HKAS 38149 were observed, but none in HKAS 38127. On the contrary, there are yellow-brown sphaerocysts in the cecidiocarp cuticle of HKAS 38127, but none in HKAS 38149. Neither chlamydozoospores nor sphaerocysts in the cecidiocarp of *S. umbonata* have been reported. However, all important characters of the fruitbodies of HKAS 38127 and 38149 show that they are *S. umbonata*. The cecidiocarps of the two specimens may represent different fungal hosts. Some hosts may produce chlamydozoospores and/or sphaerocysts, while some not. Thus, in identifying species of *Squamanita*, characters of the parasite are more important than those of hosts.

Ikeda (1996) reported *S. umbonata* from Japan. According to his description, the basidia are 2-spored. This differs from the observations of Bas (1965) and the present authors.

The genus *Squamanita* was named in Chinese "鳞伞属" by Zheng *et al.* (1990), which is the same for the genus *Pholiota* as proposed by Anonymous (1976) and Zheng *et al.* (1990). Thus, a new Chinese name "菌瘦伞属" is suggested for the genus. Consequently, "脐突菌瘦伞" is renamed for *S. umbonata* (Sumst.) Bas against "脐突鳞伞" called by Zheng *et al.* (1990).

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