

# 日本新産種アカチャヌメリイグチ(新称)について

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## *Suillus glandulosus*, a bolete species new to Japan\*

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### Abstract

A North American bolete species, *Suillus glandulosus* is newly recorded from Japan based on collections made in mixed *Picea-Abies* forests of Hokkaido (September) . Morphological description and photographs of basidiomata in the habitat, basidiospores, and cystidia of the Japanese material are given for comparison.

**Key words:** boletes, fungi, *Fuscoboletinus*, morphology, mycogeography.

This brief note records a bolete species, *Suillus glandulosus* (Peck) Singer from Japan for the first time based on collections made in Hokkaido in *Picea-Abies* forests (September). The species was originally reported from New Brunswick, Canada (Peck, 1909) and since then has been known throughout northeastern North America growing under conifers, such as *Abies*, *Picea*, *Tsuga*, and *Thuja* (Both, 1993; Bessette, Roody and Bessette, 2000, Grund and Harrison, 1976; Pomerleau and Smith, 1962; Smith and Thiers, 1971; Snell and Dick, 1970). Outside North America *S. glandulosus* has been recorded in China (Ding and Wen, 2003) and Taiwan (Cheng and Yeh, 2000).

In the following description color names and notations, such as “7E8-henna and 4A5-butter yellow” are from Kernerup and Wanscher (1967); color names in double quotation marks, such as “Dark Vinaceous” and “Dark Brick” from Rayner (1970). All specimens examined are deposited in the herbarium of the Tottori Mycological Institute (TMI).

*Suillus glandulosus* (Peck) Singer, Lilloa 22: 657. 1951 ('1949').

Figs. 1-3.

*Boletinus glandulosus* Peck, Bull. New York State Mus. 131: 34. 1909.

*Fuscoboletinus glandulosus* (Peck) Pomerleau & Smith, Brittonia 14: 162, pls. 3, 4. 1962.

Selected icones: Snell and Dick (1970: Pl. 12-above right).

Selected descriptions and illustrations: Bessette, Rody and Bessette (2000: 176, 318 (color photos in the middle row) as *F. glandulosus*); Grund and Harrison (1976: 132-134; fig. 43 & pl. 34 as *F. glandulosus*); Pomerleau and Smith (1962: 162, pls. 3, 4 (upper figure) as *F. glandulosus*); Snell and Dick (1970: 26, pl. 75, fig. 5).

Pileus up to 90 mm broad, convex to conico-convex, finally nearly plane, dull subconic umbonate

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Figs. 1-3. Basidiomata, basidiospores, and hymenial cystidia of *Suillus glandulosus*. Fig. 1. Basidiomata in the habitat (TMI-26310). Fig.2. Basidiospores in KOH (TMI-26311). Fig. 3. Hymenial cystidia in KOH (TMI-26311). Scale bar: 1 cm for Fig. 1; 10  $\mu$ m for Figs. 2 and 3.

at times; surface glutinous to viscid when wet, (brown) to reddish brown (7E7 to 7E8-henna, 8E7-mahogany brown to 8E8-reddish brown); context light yellow (4A5-butter yellow), unchanging. Hymenophore clearly boletinoid when mature, decurrent; tubes up to 5 mm long, brownish orange (5C6) to yellowish brown (5E7-linoleum brown, 5E8-yellowish brown) to brown (6E7-cognac, 6E8-rust brown) when mature, bright yellow when very young; pores angular, comparatively large (up to 3 mm long in radial directions, up to 2.5 mm wide), subcompound. Stipe 60-95 × 11-14 mm (at apex), up to 18 mm broad at base, equal or somewhat enlarged downward, often flexuous, annulate apically, solid; surface viscid when wet, light yellow above the annulus, more or less concolorous with the pileus below it, with appressed scaly patches, base light yellow (3A4, 5), annulus membranous, becoming gelatinized with age; context yellow (3A7-genet), unchanging when sectioned. Basidiospore deposit "Dark Vinaceous" when fresh, fading to "Dark Brick" (near 8D4 to 8E4) as drying.

Basidiospores 8.5-12 × 4.0-5.0 μm (n=61: 10.2 ± 0.8 × 4.3 ± 0.3 μm), l/w= 2.0-2.7 (n= 61: 2.4 ± 0.1), in profile inequilateral with a slight suprahilar depression, at times obscurely so and appearing nearly elliptical, elliptical to elliptic-fusiform to oblong-elliptical in the front, thin-walled, nearly hyaline in KOH, yellowish or purplish brown (dextrinoid) in Melzer's. Basidia 27.2-40.0 × 7.2-9.6 μm (n= 35: 32.1 ± 3.0 × 8.3 ± 0.8 μm), 4-spored. Hymenial cystidia 48-120 × 4.8-8.0 μm (n= 39: 80 ± 19.1 × 6.4 ± 0.8 μm), mostly in bundles, frequent both in the insides and edges of tubes, protruding up to 50 μm beyond the hymenium, cylindrical to narrowly cylindrical-fusiform, at times narrowly cylindrical-clavate, tapering toward the base, (reddish) brown with oleiferous homogenous content in KOH, or at times hyaline with granular content, with brown encrusting material surrounding the basal portion in KOH. Caulocystidia similar to hymenial cystidia and frequent above the annulus, but absent below it. Pileipellis a collapsed ixotrichodermium, consisting of hyphae 3-6 (-8) μm broad,

tubular, thin-walled, hyaline, Hyphae of stipe surface similar, often gelatinized. Clamp connections absent in all tissues.

**Habit, habitat and distribution:** Gregarious in mixed coniferous forests of *Picea glehnii* (Fr. Schm.) Masters. and *Abies sachalinensis* (Fr. Schm.) Masters. Hokkaido (Sounkyo, Kamikawa-cho). September.

**General distribution:** North America (Canada and U.S.A.). Asia (China and Taiwan; new to Japan).

**Collections examined:** HOKKAIDO: Kamikawa-gun, Kamikawa-cho, 14 Sept. 1985, S. Sato (TMI-26309); Kamikawa-cho, Peitora, 15 Sept. 1989, S. Sato et al. (E.N 89-107; TMI-26310); Kamikawa-cho, Uni-Ishikari, 14 Sept. 1995. E. Nagasawa et al. (TMI-26311).

**Remarks:** The glutinous to viscid, reddish brown pileus, viscid stipe, membranous annulus becoming gelatinized, boletinoid hymenophore, and the spore deposit with a purplish tint are good field characters of this species separating it from similar species. The Japanese bolete described above agrees well in its essential characters with previous descriptions and illustrations of *S. glandulosus* cited above. In Japan it may be confused with *S. grevillei* (Klotzsch: Fr.) Singer in its appearance, but the latter grows in *Larix* forests, have a hymenophore not boletinoid, and bears a brownish yellow to light brown spore print lacking purplish tints. It is interesting that Grund and Harrison (1976) observed in Nova Scotia, Canada that *S. glandulosus* often grew with or near *Gomphidius guttinus* (Schaeff.: Fr.) Fr. and suggested a close association of the two species. We observed once such a case, when the collection TMI-26310 was collected in a *Picea-Abies* forest in Kamikawa-cho, Hokkaido.

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## 摘 要

北米産のイグチ類の1種 *Suillus glandulosus* を、北海道上川町のアカエゾマツ・トドマツ混交林で採集された標本に基づいて日本新産種として報告し、アカチャヌメリイグチの和名を与えた。傘が赤褐色で著しい粘性を帯びること、管孔が多角形で放射状に配列すること（アミハナイグチ型）、柄が粘性を帯び、また、粘性な膜質のつばをもつこと、胞子紋がブドウ酒色を帯びることなどを主要な特徴とする。日本に産する種類では、外観的にハナイグチ (*S. grevillei*) に類似するが、同種はカラマツ林に発生し、管孔は放射状に配列することが無く、また、胞子紋は帯褐黄色～明褐色で紫色を帯びないなどの点で容易に区別できる。