

NOTE

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Haploporus subtrameteus (Polyporaceae, Basidiomycota) found in Japan

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Abstract *Haploporus subtrameteus*, a rare polypore, is newly reported for Japan. This fungus was known only from three localities in the Russian Far East, Altai Mts., and three in China. The Japanese material was on a dead tree of *Padus grayana* around Aokigahara-marubi, Mt. Fuji. This article gives detailed morphology based on the Japanese collection and a photo in the natural habitat.

Key words Mt. Fuji · Polypore · Taxonomy

A field trip to Mt. Fuji in Japan was made in November 2007, and some wood-decaying fungi were investigated. A polypore, *Haploporus subtrameteus* (Pilát) Y.C. Dai & Niemelä, was found on a dead tree of *Padus grayana* in an angiosperm forest near Mt. Fuji. Because the fungus has not been recorded in Japan (Núñez and Ryvarden 2001), its detailed description is supplied according to the Japanese material. The voucher specimen collected in Japan is deposited in the herbarium of the Applied Institute of Ecology, Chinese Academy of Sciences (IFP), and duplicates were forwarded to the Mycological Herbarium of Forestry and Forest Products Research Institute, Japan (TFM), and the Herbarium of National Museum of Science, Japan (TNS). The microscopic method used in this study is the same as that described by Cui et al. (2007).

Haploporus subtrameteus (Pilát) Y.C. Dai & Niemelä Ann. Bot. Fenn. 39: 181, 2002. Figs. 1, 2

Pachykytospora subtrametea (Pilát) Kotl. & Pouzar, Česká Mykol. 33:130, 1979.

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Poria subtrametea Pilát ex Pilát, Sborn. Nár. Mus. Praha, B, No. 2, 9:106, 1953.

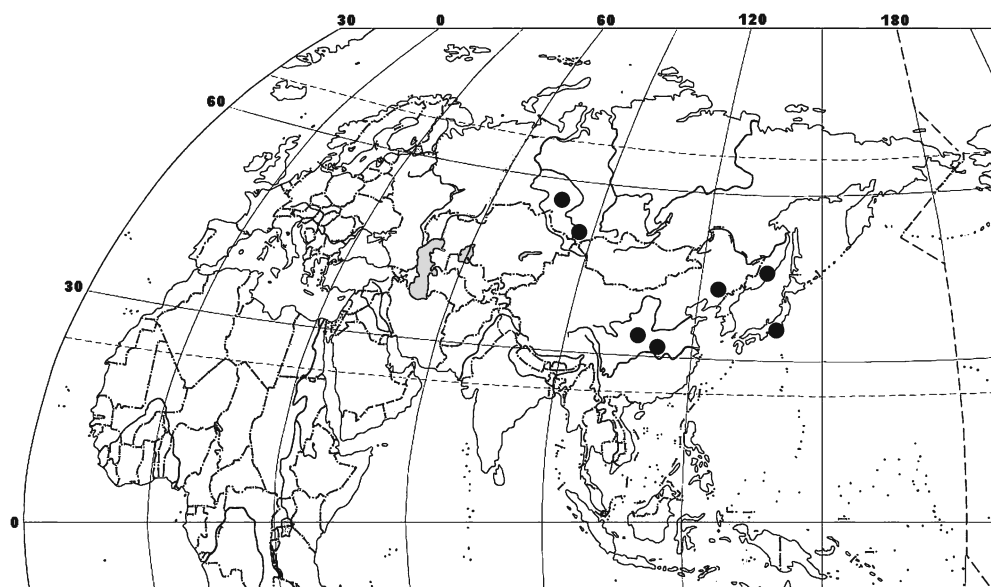
Basidiocarps perennial, resupinate, more or less cushion shaped, inseparable, ~15 cm or more in longest dimension, 7 cm or more wide, up to 7 mm thick at center, soft corky when fresh, without odor or taste, becoming hard corky to woody corky and slightly lighter in weight upon drying. Pore surface white when fresh, buff to pinkish buff when dry, not glancing; sterile margin very narrow to almost lacking; pores round or sinuous, 3–4 per millimeter; tube mouths slightly thick, entire. Subiculum cream colored and corky when dry, very thin, about 1 mm thick. Tubes buff when dry, concolorous with pore surface, slightly darker than subiculum, corky to woody corky, tube layers up to 6 mm long, indistinctly stratified.

Hyphal system dimitic; generative hyphae with clamp connections; skeletal hyphae dominant, negative in Melzer's reagent, moderately cyanophilous in cotton blue; tissue unchanged in 5% potassium hydroxide. Contextual generative hyphae hyaline, thin walled, frequently bearing clamp connections, occasionally branched, 2–3.5 μm in diameter. Contextual skeletal hyphae dominant, hyaline, distinctly thick walled, frequently branched, bearing a narrow lumen to subsolid, strongly interwoven, 2.5–4 μm in diameter; branched hyphae hyaline, thick walled, strongly flexuous, bearing a narrow lumen to almost solid, 1–2 μm in diameter; irregularly shaped crystals occasionally present. Tramal generative hyphae hyaline, thin walled, frequently bearing clamp connections, occasionally branched, 2–3 μm in diameter; tramal skeletal hyphae dominant, hyaline, distinctly thick walled with a narrow lumen, interwoven, 2–4 μm in diameter. Cystidia and cystidioles absent. Basidia pear shaped to short barrel shaped, with a basal clamp connection and four sterigmata, 15–27 \times 8–11 μm ; basidioles in shape similar to basidia, but slightly smaller. Irregularly shaped crystals occasionally present in both hymenium and trama. Basidiospores ellipsoid to oblong ellipsoid, hyaline, thick walled, ornamented, negative in Melzer's reagent, strongly cyanophilous in cotton blue, (7.5–)7.7–9.8(–11) \times (4.3–)4.6–5.8(–5.9) μm , L = 8.59 μm , W = 5.12 μm , Q = 1.68 ($n = 30/1$).

Fig. 1. Basidiocarp of *Haploporus subtrameteus* (IFP 1014878)



Fig. 2. Distribution map of *Haploporus subtrameteus*



Specimen examined. Japan. Yamanashi Pref., around Aokigahara-marubi, Mt. Fuji, alt. 1000 m, on dead tree of *Padus grayana*, 27 November 2007, Dai 9429 (IFP 1014878, TNS-F-12076).

Other specimens examined. China. Hubei Prov. Fang County, Shennongjia Nat. Res., on fallen angiosperm branch, 29 August 2006, Li 1211 (IFP 1011654), same place, 22 August 2004, Wei 2047 (IFP 1008768). Shaanxi Prov. Fuping County, Fuping Nat. Res., on fallen angiosperm trunk, 28 October 2006, Yuan 2844 (IFP 1008986). Liaoning Prov., Qingyuan County, Dasuhe Forest Farm, on fallen angiosperm trunk, 23 October 2003, Wei 675 (IFP 1007452). Russia. Primorye, Ternei, on *Padus*, 12 September 1976, Parmasto (TAA 52498). Vasjuganje, on *Padus*, September 1934, Kravcev (PRM 181716, holotype).

Haploporus subtrameteus was accommodated in the genus *Pachykytospora* Kotl. & Pouzar (Kotloba and Pouzar 1979) and was recently combined with *Haploporus* Bondartsev & Singer because of its thick-walled, ornamented, and cyanophilous basidiospores (Dai et al. 2002). A detailed description of type was made by Kotloba and Pouzar (1979), and they mentioned that basidiospores of type material are weakly dextrinoid; however, based on our study of the type material, its basidiospores are negative in Melzer's reagent. Basidiospores are negative in the Japanese material also, and they are slightly smaller than those in the type material $(7.5\text{--}7.7\text{--}9.8\text{--}11) \times (4.3\text{--}4.6\text{--}5.8\text{--}5.9) \mu\text{m}$ vs. $(8.5\text{--}9\text{--}11.5\text{--}12.5) \times (5\text{--}5.5\text{--}6\text{--}6.5) \mu\text{m}$ (based on our study from the type). The spores of the Chinese collection examined are negative in Melzer's reagent, and basidiospore dimen-

sions in the Chinese collections are just between the Japanese and the type specimen from Russia, (7.9–)8.6–11(–13.7) × (4.7–)4.8–6.2(–6.9) μm (Cui and Wei 2004). Thus, the minor differences of basidiospores in the collections from Japan, China, and Russia are intraspecific variation. *Haploporus subtrameteus* is a very rare polypore, and it has been previously known from three localities in Russia, Vasjuganje, Altai, and Primorye (Kotloba and Pouzar 1979), and three localities in China, Liaoning, Shaanxi, and Hubei (Cui and Wei 2004; Li et al. 2008; Dai et al. 2009). The present report is the seventh record of the species in the world, and its current distribution map is shown in Fig. 2. Figure 1 is the first photograph of this species in nature.

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