

RESEARCH NOTE

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Species Belonging to Genus *Protodaedalea* in Korea

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One rare and interesting species collected from Seorak-san, Inje-gun; Yeonyeop-san, Hongcheon-gun; Daeam-san, Yanggu-gun, Gangwon-do; Pocheon-gun, Gyeonggi-do; Songni-san, Boeun-gun; Joryeong-san, Goesan-gun, Chungcheongbuk-do and Sobaeksan, Yeongju-si, Gyeongsangbuk-do is described and illustrated in detail. The species "*Protodaedalea hispida* Imazeki" and genus "*Protodaedalea* Imazeki" has not been previously recorded in Korean fungal flora. The specimens have been deposited in the Herbarium Conservation Center of the National Academy of Agricultural Sciences.

KEYWORDS : Fungal flora, Genus *Protodaedalea*, *Protodaedalea hispida*

The specimens HCCN7713A, HCCN1946A, HCCN6948A, HCCN18557A, HCCN1246A, HCCN1857A, HCCN5808A, HCCN16548A, HCCN21372A, and HCCN21386A were collected from Seorak-san, Inje-gun; Yeonyeop-san, Hongcheon-gun; Daeam-san, Yanggu-gun, Gangwon-do; Pocheon-gun, Gyeonggi-do; Songni-san, Boeun-gun; Joryeong-san, Goesan-gun, Chungcheongbuk-do, and Sobaeksan, Yeongju-si, Gyeongsangbuk-do, respectively, in the summer rainy season. Measurements were made of all structures by sampling. For examination of the microscopic features, the segments of dried basidiocarps were transferred in vials with 70% alcohol or distilled water until the cells swelled to near their original size and shape. Then, the gill sections or trama were each placed on a slide glass, stained with staining reagents, covered with a coverslip, and observed under a light microscope. The macro and microscopic features are described in detail and illustrated with their habits and habitats. In the species descriptions, the range of the sample size is given, and the extreme variations are enclosed in parenthesis (e.g., spores (5) 7~12 (14.5) × 3.2~4 (5.5) μm. In the following descriptions, color names given in quotations and color notations, e.g., 4A2~8F4, are from those of Kernerup and Wanscher [1].

Protodaedalea **Imazeki**, in Rev. Mycol. Paris 20: 159 [2]
Korean name. Miromgisok.

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Position in classification. Auriculariales, Agaricomycetes, Agaricomycotina, Basidiomycota, Fungi [3].

Type species. *Protodaedalea hispida* Imazeki.

Basidiocarp sessile, dimidiate, annual. Flesh tough, leathery not shrinking when dry and not reviving when soaked. Hymenophore lenzoid to daedaloid, poroid. Upper surface hispid, the hairs long, tapered, often branched. Context and dissepiments dimitic, consisting of thin-walled, branched, generative hyphae, with clamp connection and thick-walled skeletal hyphae with infrequently branches and septa. Basidia of the sphaeropedunculate type, but clavate, the upper portion longitudinally becoming septate, divergent septa, epibasidia short, tapered. Cystidia none, gloeocystidia present. Only one species is known.

Distribution. Korea and Japan.

Protodaedalea hispida **Imazeki**, in Rev. Mycol. Paris 20: 158-160 [2].

Macroscopic features (Fig. 1).

Carpophores: 35~160 mm wide, 8~75 mm thick, pileate, stalkless, at first convex then plane, dimidiate or somewhat unguulate, at first moist, gelatinous flesh, more or less fragile, leathery when old, surface yellowish white (4A2), ivory (4B3), champagne (4B4) to greyish orange (5B3~4),

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Fig. 1. A, B, Different views of carphophores of *Protodaedalea hispida*.

brownish orange (5C4~5), darker when dry, densely covered with long hairy branched like feathers, up to 5 mm. Underside with the hymenium arranged radially daedaloid to large poroid irregularly with spinose at edge.

Stipe: Absent.

Context: Contracting when dry.

Microscopic features (Fig. 2).

Spores: $10\sim 12.2 \times 6.1\sim 6.5 \mu\text{m}$ ($10\sim 12 \times 4\sim 7 \mu\text{m}$), ovoid, smooth, hyaline. Spore print whitish.

Basidia: $39.2\sim 47.8 \times 7.5\sim 8.7 \mu\text{m}$ ($17\sim 23 \times 6\sim 13 \mu\text{m}$), hypobasidia oblong to clavate, when mature longitudinally septate, divided into four epibasidia, sometimes with basal septa, interspersed with some hyphal strands and gloeocystidia among basidia.

Cystidia: Not seen.

Habits and habitats. Dead trunks or twigs of *Fagus* spp. and *Acer* spp.

Specimens examined. Seorak-san, Inje-gun, Gangwon-do,

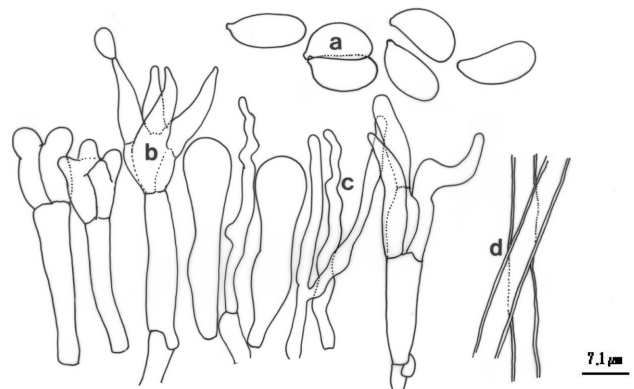


Fig. 2. Microscopic structures of *Protodaedalea hispida*. a, Spores ($\times 1,000$); b, Basidia ($\times 1,000$); c, Paraphyses ($\times 1,000$); d, Hyphae ($\times 1,000$).

July 10, 1997 (HCCN7713A); Yeonyeop-san, Hongcheon-gun, Gangwon-do, August 30, 1986 (HCCN1946A); June 26, 1996 (HCCN6948A); Daeam-san, Yanggu-gun, Gangwon-do, August 13, 2009 (HCCN18557A); Pocheon-gun, Gyeonggi-do, August 24, 1985 (HCCN1246A), August 14, 1986 (HCCN1857A); Songni-san, Boeun-gun, Chungcheongbuk-do, July 22, 1996 (HCCN5808A); Joryeong-san, Goesan-gun, Chungcheongbuk-do, July 10, 2008 (HCCN16548A); Sobaek-san, Yeongju-si, Gyeongsangbuk-do, July 5, 2011 (HCCN21372A; HCCN21386A).

Remarks. This taxa is characterized by the pileus convex then plane, dimidiate or somewhat unguulate, gelatinous flesh, when old leathery, surface yellowish white, ivory, brownish orange, densely covered with long hairy branched like feathers, up to 5 mm. stalkless, hymenium arranged radially daedaloid to large poroid irregularly with spinose at edge, spores $10\sim 12.2 \times 6.1\sim 6.5 \mu\text{m}$, hypobasidia oblong to clavate, when mature longitudinally septate, divided into 4-epibasidia, sometimes with basal septa and gloeocystidia present [4].

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