



Dentipellis rhizomorpha sp. nov. supported by morphological and phylogenetic analyses

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With 4 figures and 1 table

Abstract: *Dentipellis rhizomorpha* sp. nov. is described and illustrated from China based on morphological characters and rDNA sequence data. It is characterized by an annual growth habit, resupinate basidiocarps with distinct white rhizomorphs, a monomitic hyphal structure with non-amyloid, non-dextrinoid and cyanophilous generative hyphae, absence of gloeoplerous hyphae and gloecystidia, presence of cystidia and cystidioles, and rough basidiospores ($3.5\text{--}4 \times 2.6\text{--}3 \mu\text{m}$). A molecular study based on the combined ITS (internal transcribed spacer region) and nLSU (the large nuclear ribosomal RNA subunit) dataset supports the new species in *Dentipellis*. A key to accepted species of *Dentipellis* is provided.

Key words: Hericiaceae, hydroid fungi, *Russulales*, taxonomy, wood-inhabiting fungi.

Introduction

Dentipellis Donk (Russulales, Basidiomycota), typified by *D. fragilis* (Pers.) Donk, was introduced for species characterized by an annual growth habit, hydroid basidiocarps, soft spines, a monomitic hyphal structure with clamp connections and cyanophilous hyphae, and amyloid rough basidiospores (Dai et al. 2009, Ginns 1986, Zhou & Dai 2013). Zhou & Dai (2013), who demonstrated that *Dentipellis* was polyphyletic, segregated *Dentipellis leptodon* (Mont.) Maas Geest. and *Dentipellis taiwaniana* Sheng H.Wu from *Dentipellis* based on ITS and nLSU rDNA sequences. They proposed *Dentipellicula* Y.C.Dai & L.W.Zhou as a new genus for these two hydroid fungal species, which are distinguished from *Dentipellis* by their lack of cyanophilous hyphae. Chen et al. (2016) maintained that *Dentipellis* remains polyphyletic based on ITS and nLSU rDNA sequences, while the new segregate genus *Dentipellicula* is monophyletic. A fully resolved phylogeny for *Dentipellis* and its related genera requires evolutionary

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