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Physarina alboscabra (Didymiaceae) Found in Taiwan

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Abstract

Physarina alboscabra Nannenga-Bremekamp & Yamamoto 1986 hitherto only known from type locality is recorded from Taiwan.

Introduction

The genus *Didymium* was erected in 1797, *Diderma* in 1794, and *Lepidoderma* in 1873. Compared with these well-established genera of Didymiaceae, the myxomycete genus *Physarina* was not discovered until 1909. Species of *Physarina* are characterized by numerous blunt, peg-like protuberances on the peridium (Martin & Alexopoulos 1969). To date it has three species, namely *P. echinocephala* Hoehnel, *P. echinospora* Thind & Manocha, and *P. alboscabra* Nannenga-Bremekamp & Y. Yamamoto. Except Alexopoulos & Blackwell (1968) reported *P. echinospora* from Mexico, all other records of this genus are from eastern and southern part of Asia (Farr 1976).

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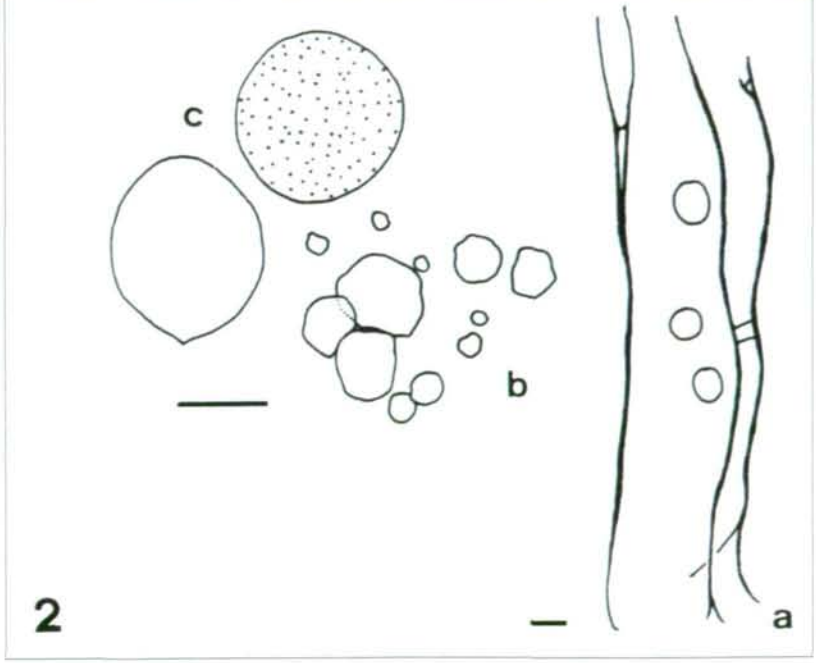
Materials and Methods

Specimens collected in the field were examined under light microscopes. Measurements of the myxomycete sporocarps were made under a stereomicroscope attached with an ocular micrometer. For light microscopy, sporocarps were prewetted with 95% ethanol and mounted in 2% KOH. Examination of the details of the spore ornamentation and measurement of the diameter of the spores was performed by using oil lens (X1000). Ornamentation of the spores was excluded when measuring the spore size.

Results and Discussion

Physarina alboscabra NANNENGA-BREMEKAMP & YAMAMOTO 1986 (Figs 1, 2)





Figs 1, 2: *Physarina alboscabra*. 1: sporocarps, ca. 30X.
2. a: capillitium and spores (rounded ones) (bar = 10 μm); b: peridial lime depositions, c: spores (bar = 5 μm).

Sporocarps sporangiate, gregarious, stalked, total height 0.8 - 1.55 mm. **Sporophores** hemisphaerical, with many white lime pustules, (0.5 -) 0.65 - 0.75 mm in diam. **Stalk** 1/2 or more of the total height, stout, calcareous (internally packed with lime), slightly plicate. **Hypothallus** white and limy or occasionally non-calcareous and thus indistinct. **Peridium** membranous, appearing single, with many lime pustules; dehiscence through the reticulations between the lime pustules. **Columella** being a subglobose projection of stalk into the sporophore, the surface varying from brownish orange to ochraceous. **Capillitium** profuse, branching and interconnecting, purplish brown, radiating from columella. **Spores** brown in mass, paler in transmitted light, globose to elliptical, the globose ones 8 - 9 μm in diam., the elliptical ones 8 x 10 μm, with their two ends on longer axis slightly pointed, minutely warted. **Plasmodium** not seen.

Specimen examined: Taiwan, Hualien County, around Nan-an Waterfall, C. H. CHUNG M2121a, 26-10-1997, on dicotyledonous litter.

Distribution: Hitherto only known from type locality. New to Taiwan.

Other myxomycetes (e. g. *Diachea bulbillosa*) found in the same site fruited on a variety of substrates such as leaves, twigs or even stones. In contrast to these, *Physarina alboscabra* tends to be lignicolous, as all sporocarps were found on fine twigs. Only in some sporocarps can we observe the large lime crystals ('rounded crytstalline lime agglomerations' in original description) in lower portion of stalk. These crystals probably resulted from rapid drying.

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