

## ***Didymium floccosum* Martin, Thind & Rehill (Physarales, Myxomycetes) - New to Taiwan**

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**ABSTRACT :** *Didymium floccosum* Martin, Thind & Rehill is reported for the first time from Taiwan.

**KEY WORDS :** *Didymium floccosum*, Myxomycetes, Physarales, Taiwan.

### **INTRODUCTION**

During the course of investigating the myxomycete biota of Taiwan, we found a *Didymium* fruiting extensively on dead leaves and fronds of ferns in Wulai, Taipei County. Closer examination of the collections reveals that it is a *Didymium* species not reported from Taiwan previously. Detailed species description and illustration are provided here.

### **MATERIALS AND METHODS**

Traditional herbarium methods were used in collecting specimens. Measurements of capillitia and spores were done under an oil immersion objective. Voucher specimen is deposited in the Mycology Herbarium, Department of Botany, National Taiwan University, Taipei, Taiwan.

### **RESULTS AND DISCUSSION**

*Didymium floccosum* Martin, Thind & Rehill, Mycologia 51: 160. 1959.

Pl. I & II

**Fructification** gregarious to scattered, whitish gray or brownish while lime being scattered, sporangiate, (0.6-)0.8-1.15 mm tall, sporangia (0.25-)0.35-0.45 mm in diameter, umbillicate below. **Stalk** ochraceous, filled with amorphous lime. **Peridium** single, with darker, brown patches separated by hyaline zones; dehiscence irregular. **Columella** dark

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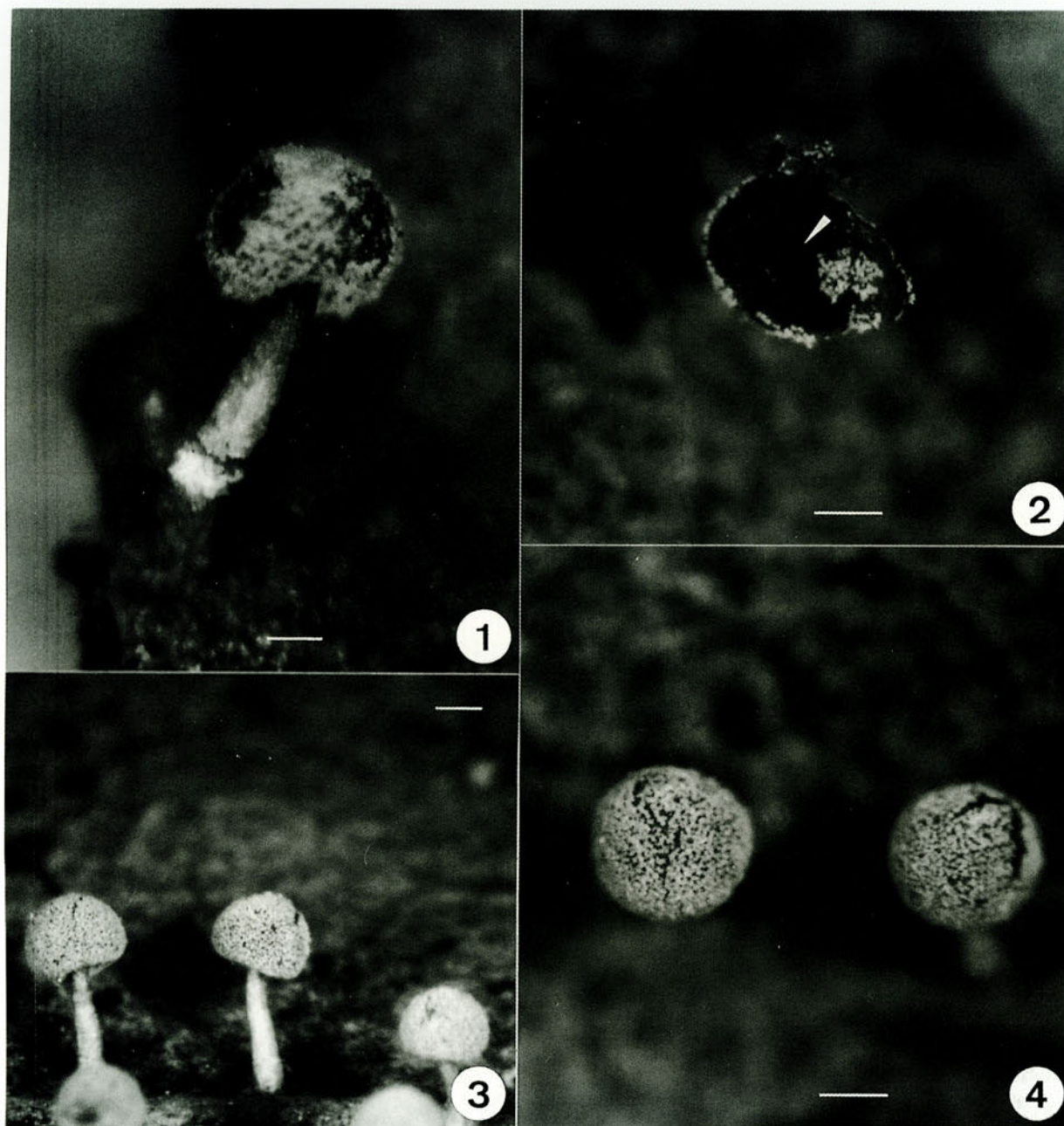


Plate I. Sporangia of *Didymium floccosum* Martin, Thind & Rehill.

Fig. 1. A sporangium broken stalk showing the white lime packing in the stalk at the breakage, bar = 0.1mm. Figs. 2,4. Sporangia at different degrees of dehiscence, bar = 0.2mm. Fig. 3. Habit of sporangia, bar = 0.2mm.

brownish, containing amorphous lime. **Hypothallus** almost colorless but distinct. **Capillitium** hyaline, with brown bead-like swellings about 1-1.5 $\mu$ m in width. **Spores** dark brown in mass, brown in transmitted light, distinctly warted, the warts not evenly distributed, globose to subglobose, 9-10 $\mu$ m in diameter. **Plasmodium** not seen.

**Habitat:** Dead leaves of broad-leaved trees and dead fronds of ferns.

**Specimens examined:** TAIWAN, Taipei County, Wulai, around Fu-shan-tsun, a shaded slope near a stream, C.-H. Chung M805, Nov. 6, 1994, on dead leaves of broad-leaved trees and dead fronds of ferns (a species of Polypodiaceae).

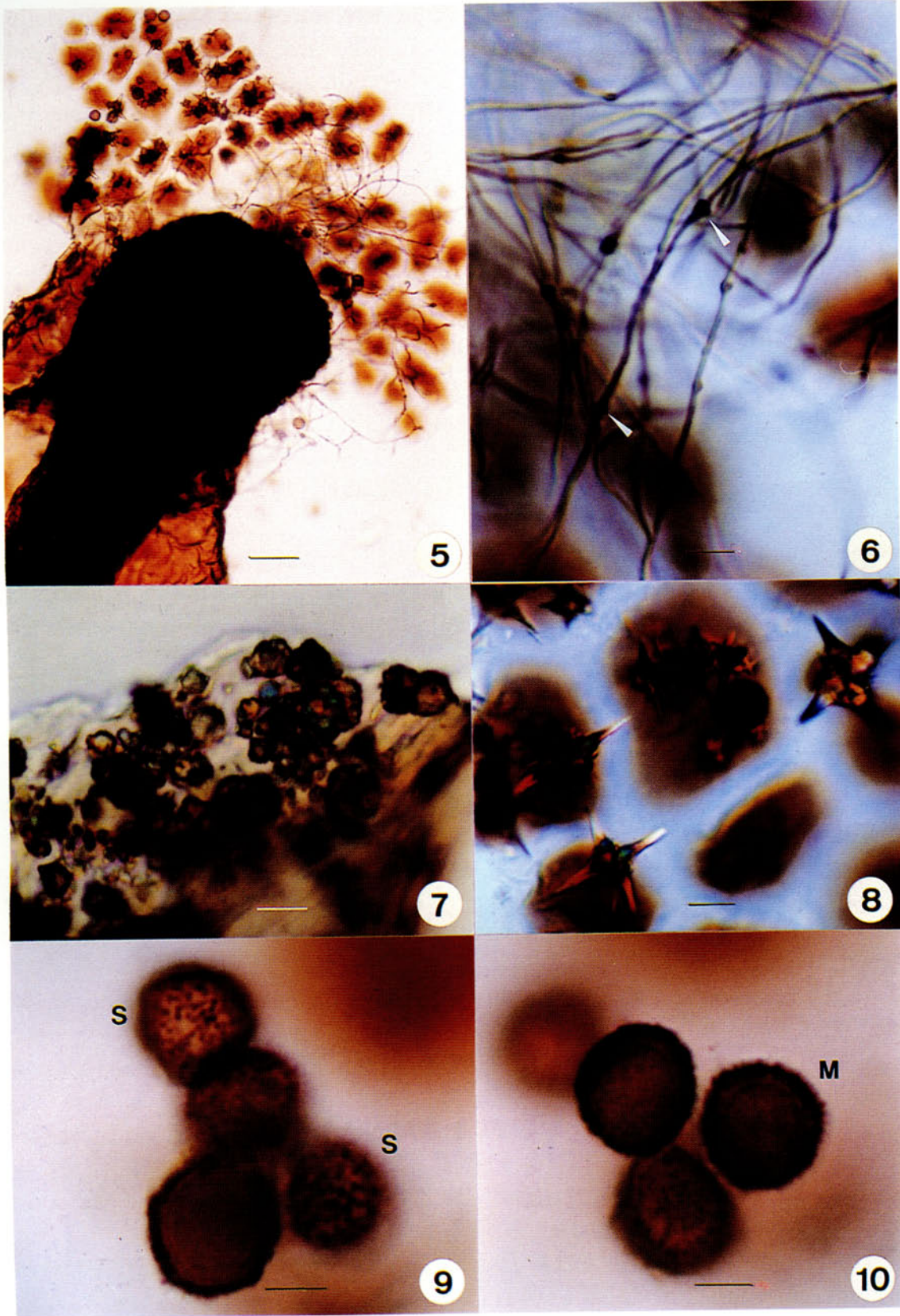


Plate II. *Didymium floccosum* Martin, Thind & Rehill.

Fig. 5. Peridial scales and columella (arrow), bar = 40 $\mu$ m. Fig. 6. Capillitial threads marked by brown bead-like swellings (arrows) , bar = 10 $\mu$ m. Fig. 7. Amorphous lime crystals in stalk, bar = 10 $\mu$ m. Fig. 8. Stellate crystalline lime crystals on peridium, bar = 10 $\mu$ m. Figs. 9,10. Spores. Marginal view (M) and surface view (S), bar = 5 $\mu$ m.

The areolate peridium and calcareous stalk are two important characters in delimitating *Didymium floccosum*. Although *D. nigripes* (Link) Fries also has areolate peridium, a characteristic shown in the figure of Martin and Alexopoulos (1969; Pl. XXXIX, fig. 348) and emphasized by Nannenga-Bremekamp (1972) in determining *D. nigripes*, the black, non-calcareous stalk makes it readily separate from *D. floccosum*. *D. minus* (A. Lister) Morgan is another species with areolate peridium, but it also has a black, non-calcareous stalk. *D. floccoides* Nannenga-Bremekamp & Yamamoto described from Kochi, Japan, differs from this species by non-umbilicate sporangia and smaller spores (7-8  $\mu\text{m}$ ).

Formerly *Didymium floccosum* was known from Equador (Farr *et al.*, 1979), Galápagos Islands (Eliasson and Nannenga-Bremekamp, 1983), India (Martin *et al.*, 1959; Lakhanpal and Mukerji, 1981), Japan (Matsumoto and Deguchi, 1994) and Venezuela (Farr, 1974, 1976).

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臺灣新發現的黏菌 -  
*Didymium floccosum* Martin, Thind & Rehill (絨泡黏菌目, 黏菌綱)

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摘 要

本文報導 *Didymium floccosum* Martin, Thind & Rehill 在臺灣首次的發現並附圖說。

關鍵詞：絨泡黏菌目，黏菌，臺灣，*Didymium floccosum*。

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