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Notes on Some Myxomycetes from Kenting National Park

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ABSTRACT: Kenting National Park is located in Hengchun Peninsula, the southernmost part of Taiwan. We report four Myxomycetes from this National Park. They are *Collaria elegans* (Racib.) Dhillon & Nann.-Brem. var. *pallens* (G. Lister) Dhillon & Nann.-Brem. ex Nann.-Brem., *Craterium leucocephalum* (Persoon) Ditmar var. *scyphoides* Lister, *Fuligo cinerea* (Schweinitz) Morgan, and *Stemonaria pilosa* Nann.-Brem. All taxa are new to Taiwan except *F. cinerea*.

KEY WORDS: Myxomycetes, Slime molds, Taiwan.

INTRODUCTION

Not much work has been done for the myxomycete biota of Kenting National Park. Liu (1982, 1983, 1989) has reported some Myxomycetes from Kenting, with a majority of them being new records to Taiwan. Wang and Chien (1987) reported 46 species of Myxomycetes from this area. In addition, an interesting new species of *Licea* was found in eastern part of Kenting National Park in 1996 (Chung and Liu, 1996). In this paper we report four Myxomycetes from this park.

MATERIALS AND METHODS

Specimens were either collected directly from the field or harvested from moist chamber cultures. Moist chamber cultures were processed according to Chiang and Liu (1991). Measurements were done with an ocular micrometer. For microscopic observations, sporangia were prewetted with 95% ethanol and mounted in 2% KOH. Spore ornamentation and diameter were examined under an oil immersion objective (x1000). The measurements of spores exclude the oranamentation. All specimens examined are deposited in Mycology Laboratory, Department of Botany, National Taiwan University. Names of vascular plants follow those of Flora of Taiwan (Li *et al.*, 1975-1979). The abbreviation " mc " stands for moist chamber cultures.

RESULTS AND DISCUSSION

1. **Collaria elegans** (Racib.) Dhillon & Nann.-Brem. var. **pallens** (G. Lister) Dhillon & Nann.- Brem. ex Nann.-Brem., Ned. Myxom.: 487. 1983.

圓頭項圈黏菌淡色變種 Figs. 1 and 2

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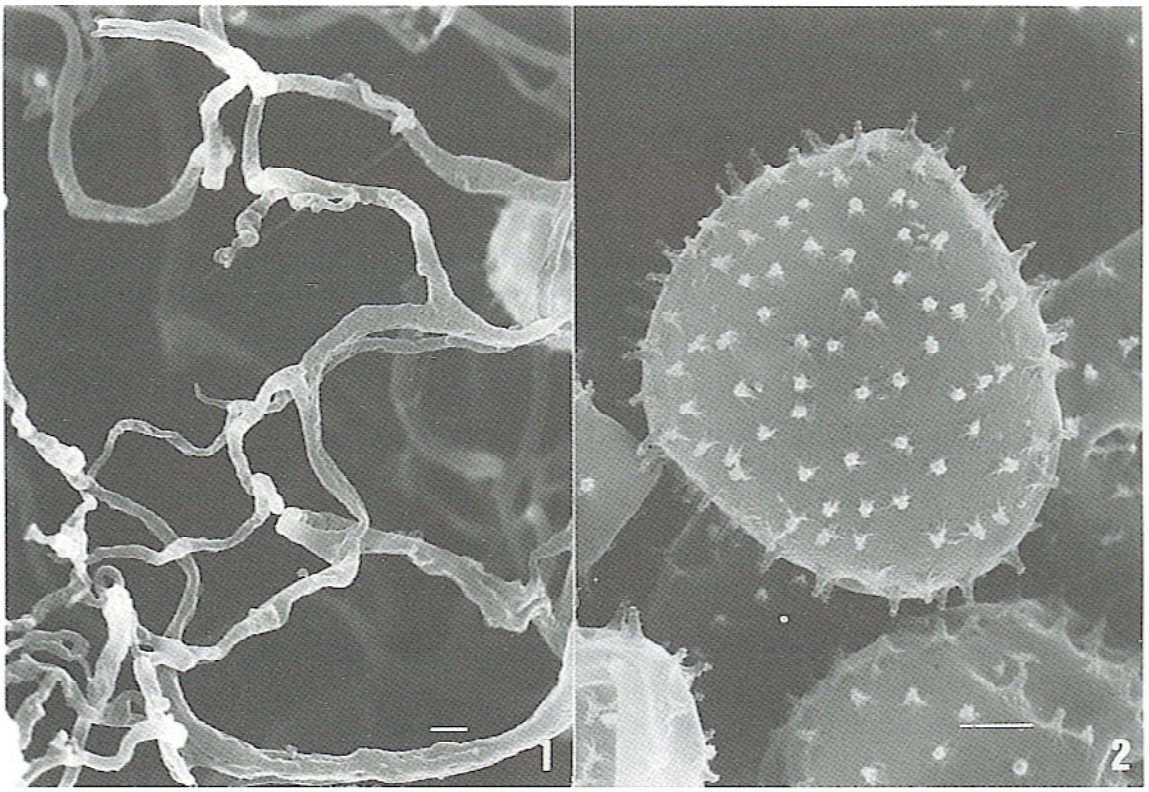
Basionym: *Comatricha elegans* (Racib.) G. Lister var. *pallens* G. Lister, Mycet. ed. 3: 144. 1925.

Fructification sporangiate, stalked, loosely gregarious, about 1 mm in total height; sporophore 90 - 200 μm in diameter, globose, brown. **Stalk** attenuating, fibrous, black and shining in reflective light, yellowish brown in transmitted light. **Hypothallus** indistinct. **Peridium** fugacious, collar not seen. **Columella** dividing into few primary branches which give rise to capillitium. **Capillitium** pale brownish yellow, dichotomously branching and occasionally anastomosing, with sharp endings. **Spores** reddish brown in mass, pale brownish in transmitted light, globose, 7 - 8 μm in diameter, distinctly warted, the warts scattered.

TAIWAN, Pingtung County, eastern edge of Wan-li-te-shan (萬里得山東側支稜), *C.-H. Chung M1003*, 29 II 1996, decaying fruit of *Castanopsis stellato-spina* Hayata, mc 1 - 20 III 1996.

Distribution: British Isles, Japan, Netherlands, Taiwan.

Remarks: This variety is different from the nominate variety in the paler spore mass. Wang (1984) reported two specimens as *Comatricha elegans* in her thesis, noting that the color of the sporangia varies from deep brown (Wang 0561, from Wulai, Taipei County, *n. v.*) to soil-like brown (Wang 0371, from Chin-mei, Taipei Metropolitan, *n. v.*). The latter very probably belongs to *Collaria elegans* var. *pallens*.



Figs. 1, 2. *Collaria elegans* var. *pallens*. Fig. 1. Capillitium, bar = 1 μm; Fig. 2. Spores, bar = 1 μm.

2. **Craterium leucocephalum** (Pers.) Ditmar var. **scyphoides** Lister, Mycet. ed. 2: 97. 1911.
白頭高杯黏菌杯狀變種 Fig. 3

Fructification sporangiate, stalked, gregarious, 0.7 - 0.8 mm in total height; sporophore white, globose to subglobose, 0.35- 0.45 mm in diameter. **Stalk** longitudinally striate, orange brown in reflective light, the upper portion translucent and yellowish orange in transmitted light, the lower portion containing dark granules. **Hypothallus** brownish, membranous, indistinct. **Peridium** single, membranous; dehiscence circumscissile, leaving the lower half of peridium as a cup. **Columella** none. **Capillitium** reticulate, connecting threads hyaline, with some limeless junctions, lime nodes white to yellowish, angular to somewhat badhamoid, small pseudocolumella ocassionally present. **Spores** brown in mass, pale brown in transmitted light, globose, 7 - 8 μm in diameter, minutely warted.

TAIWAN, Pingtung County, entrance of the path to the eastern edge of Wan-li-te-shan (萬里得山東側支稜登山入口), *C.-H. Chung M1113* (a part of the fructification is in collection of *Y.-F. Chen sub no. 248*), 8 VI 1996, on dead grass and leaves.

Distribution: France, Galapagos Island, Japan, Netherlands, South Africa, Taiwan, USA.

Remarks: This variety differs from other varieties of *C. leucocephalum* mainly in the globose shape of sporophores.

3. **Fuligo cinerea** (Schwein.) Morgan, Journ. Cinc. Soc. Nat. Hist. 19: 33. 1896.
灰煤絨黏菌

Basionym: *Enteridium cinereum* Schwein., Trans. Amer. Phil. Soc. II, 4: 261. 1832.

Fructification aethaliate, sessile, soliltary, white, 5 mm in longer dimension, 3 mm thick. **Cortex** firm, thick, white. **Hypothallus** whitish, membranous. **Capillitium** hyaline, with large, white, angular lime nodes. **Spores** nearly black in mass, brown in transmitted light, globose to elliptical, globose ones 9 - 11 μm in diameter, elliptical ones 13 × 11 μm, distinctly spinulose.

TAIWAN, Pingtung County, Nan-jen-shan Work Station (南仁山工作站), *Y.-F. Chen s. n.*, 3 VIII 1995, on bark of *Vitex negundo* L.

Distribution: Africa, Brazil, Cuba, India, Jamaica, Japan, Mexico, Netherlands, North America, Sri Lanka, Taiwan, West Indies.

Remarks: The specimen was associated with mites. According to Blackwell (1984, p.81), myxomycete-mite associations have been reported only in *Ceratiomyxa*, *Lycogala*, and *Physarum*. This is the first record of mite - *Fuligo* association.

4. **Stemonaria pilosa** Nann.-Brem. in Nann.-Brem., Y. Yamam. & Sharma, Proc. Kon. Ned. Akad. Wet. C.: 87: 455. 1984. Fig. 4

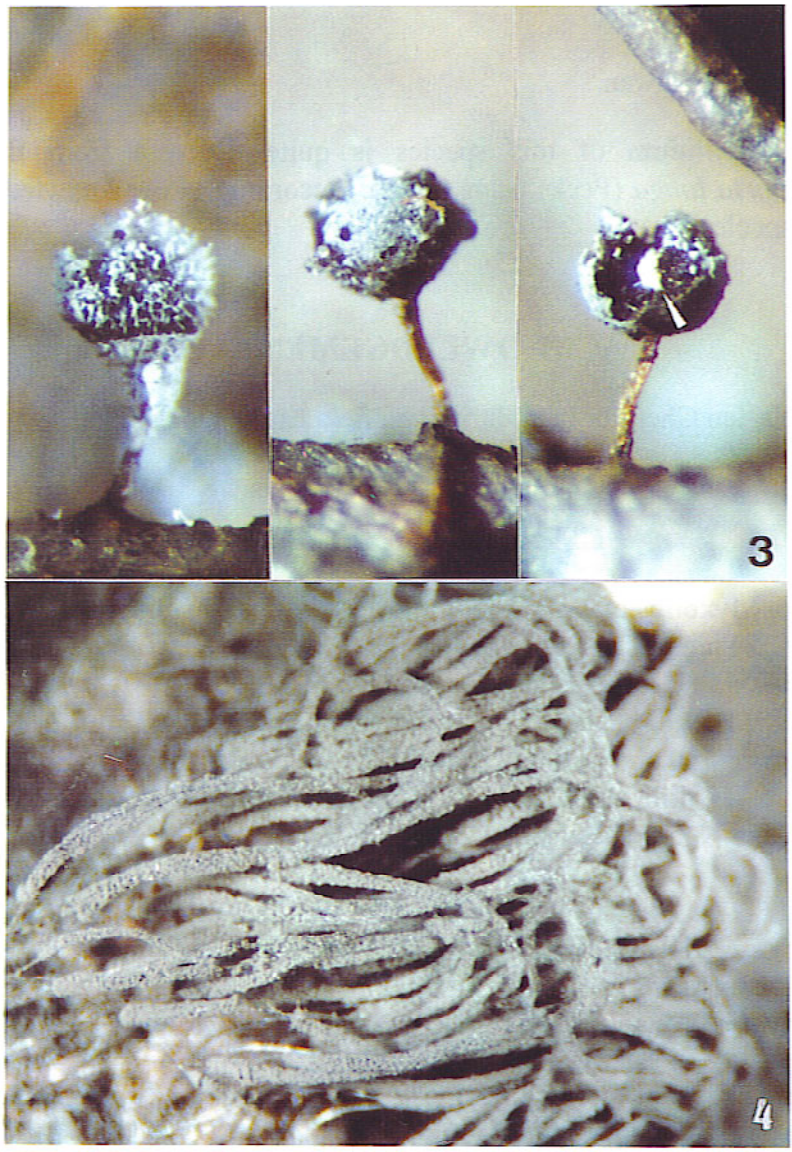


Fig. 3. Fructification of *Craterium leucocephalum* var. *scyphoides*; *ca.* 48x. Arrow: pseudocolumella.
Fig. 4. Fructification of *Stemonaria pilosa*; *ca.* 14x.

Fructification sporangiate, stalked, in tufts, 8-14 mm in total height; sporophore cylindrical, bending over, dark brown with grayish tints, 0.2 - 0.25 mm in diameter. **Stalk** 1 - 3 mm long, black and shining in reflective light, translucent and reddish brown in transmitted light. **Hypothallus** membranous, shining, common to each tuft of sporangia. **Peridium** fugacious. **Columella** concolorous with stalk (either in reflective or transmited light), attenuating, extending to almost the apex of the sporophore. **Capillitium** lax, arising from all parts of columella, united and forming an internal net, with many membranous expansions at forks, some bulbous expansions, and numerous branchlets pointing outwards; surface net lacking. **Spores** dark brown in mass, paler in transmitted light, globose, 7 - 9 (- 9.5) μm in diameter, spinulose-reticulate.

TAIWAN, Pingtung County, Kenting Park (墾丁公園), *Liu CHLB 729*, 1 VII 1987, on bark and wood of dead fallen tree.

Distribution: Austria, Taiwan.

Remarks: The capillitium of this species is quite different from the commonly encountered *Stemonaria longa* (Peck) Nann.-Brem. According to our knowledge, this is the first record of this species in Asia.

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墾丁國家公園產黏菌小記

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摘　　要

墾丁國家公園位於臺灣最南端的恒春半島，本文報導四種採自該地區的黏菌 — 圓頭項圈黏菌淡色變種、白頭高杯黏菌杯狀變種、灰煤絨黏菌、以及 *Stemonaria pilosa*。除灰煤絨黏菌外，餘皆為臺灣新記錄之分類群。

關鍵詞：黏菌、臺灣。

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