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Two Species of *Kernia* (Plectomycetes) in Taiwan

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ABSTRACT: In this paper, two species of *Kernia* are described and illustrated. *Kernia nitida* and *K. pachypleura* are recorded as new to Taiwan. A key to these two species is provided.

KEY WORDS: coprophilous, *Kernia*, Plectomycetes, Taiwan.

INTRODUCTION

The genus *Kernia* was revised by Malloch and Cain (1971). And some new species were added to it later (Lodha, 1971; Malloch and Cain, 1973; Locquin-Linard, 1977; 1980; Calviello, 1979; Udagawa and Muroi, 1981; Udagawa and Furuya, 1988). In Taiwan, members of the genus *Kernia* (Plectomycetes, Microascaceae) are reported for the first time in this paper. They were not found in the past (Wang et al., 1999), might due to their minute and scanty cleistothecia. Specimens of the two reported species are deposited at the herbarium of National Museum of Natural Science, Taichung, Taiwan (TNM).

TAXONOMIC TREATMENTS

Key to species of *Kernia* from Taiwan

Cleistothecia ovoid or polyhedral; robust, dark hairs emerging as two opposing tufts ……..…….. *K. nitida*
Cleistothecia globose to subglobose; without tufted appendages ……..…….. *K. pachypleura*

Kernia nitida (Saccardo) Nieuwland, Amer. Midland. Natur. 4: 379. 1916. Figs. 1A-C & 2

Magnusia nitida Saccardo, Michelia 1: 123. 1878.

For more synonyms see Malloch and Cain (1971).

Cleistothecia abundant, gregarious, superficial, non-ostiolate, black, opaque, ovoid or polyhedral, 200-225 × 125-175 μm; hairs emerging as two opposing tufts on the cleistothecium, up to 460-600 μm long and 4 μm wide, dark brown by transmitted light, black by reflected light, septate, smooth, gradually tapering to a flat tip, often sharply bent at the tips, usually unbranched but sometimes once to twice forked. Peridium dark brown, pseudoparenchymatous, membranous, consisting of angular cells, 5-6 × 4-5 μm. Asci 8-spored, ovoid, 12-13 × 8-10 μm, evanescent. Ascospores irregularly arranged, pale brown to honey-colored, smooth, broadly ovoid to subglobose, 4-5 × 3-4 μm, dextrinoid when young, with a prominent de Bary bubble, and a germ pore at each end.

Specimen examined: Miaoli Co.: Tongsiao, Haowangjiao, on goat dung, *Jong 112*, Jan. 16, 2008 (TNM F21448).

Kernia pachypleura is similar to *K. nitida*, from which it differs in not having straight hairs on the cleistothecium (Malloch and Cain, 1971).

Kernia pachypleura Malloch & Cain, Can. J. Bot. 49: 864. 1971. Figs. 1D & 3

Cleistothecia abundant, gregarious, superficial, non-ostiolate, black, globose to subglobose, 200-280 μm in diam., usually white hairy when young, glabrous at maturity except for a few hyphal attachments. Peridium dark brown, pseudoparenchymatous, membranous, consisting angular cells, 5-7.5 × 3-5 μm. Asci 8-spored, ovoid to broadly clavate, with a short indistinct stip, 15-17 × 10-15 μm, evanescent. Ascospores irregularly arranged, pale yellowish brown to honey-colored, smooth, broadly ovoid to subglobose, 5-6 × 4 μm, dextrinoid when young, with a prominent de Bary bubble, and a germ pore at each narrow end.

Specimens examined: Taichung Co.: Shenkang, on goat dung, *Wang 92111*, Oct. 2, 1992 (TNM F681). Chiayi Co.: Liuchiao, on buffalo dung, *Jong S19*, Feb. 13, 2007 (TNM F20636). Pingtung Co.: Sheting, on cow dung, *Wang 93065*, Apr. 26, 1993 (TNM F611).

This species is recognized by having cleistothecia lacking tufted appendages and colored ascospores with two germ pores. It is similar to *Kernia hyalina* which differs in having hyaline ascospores with one germ pore (Malloch and Cain, 1971).

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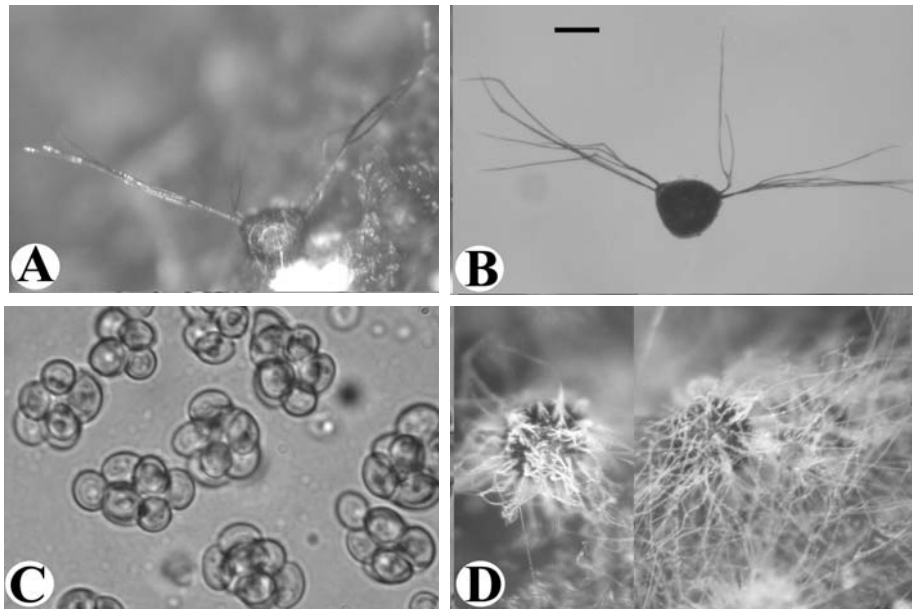


Fig. 1. A-C. *Kernia nitida*. A-B: Cleistothecia. C: Ascospores. D: Young cleistothecia of *Kernia pachypleura*. Scale bar: A, B & D = 150 μm, C = 5 μm.

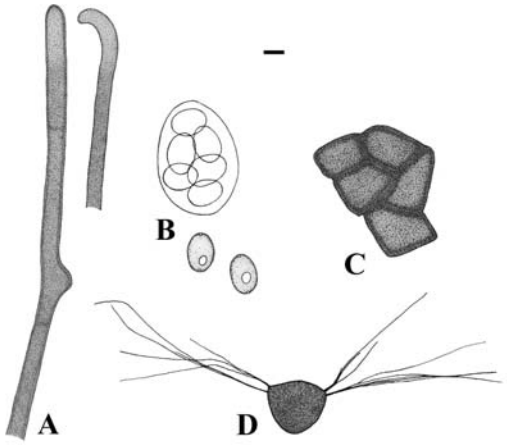


Fig. 2. *Kernia nitida*. A: Types of hairs on cleistothecium. B: Asci and ascospores. C. A part of peridium. D: A cleistothecium. Scale bar: A = 4 μm, B-C = 3 μm, D = 70 μm.

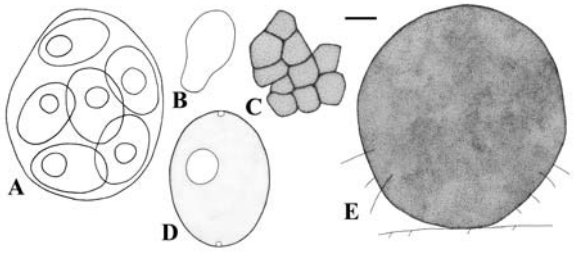


Fig. 3. *Kernia pachypleura*. A-B: Asci. C: A part of peridium. D: An ascospore. E: A mature cleistothecium. Scale bar: A = 3 μm, B-C = 8 μm, D = 1.5 μm, E = 40 μm.

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臺灣產兩種絲殼菌 (不整子囊菌類)

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摘　　要

本文描述 *Kernia nitida* 及 *K. pachypleura*，兩種均為臺灣新紀錄的糞生真菌。並提供此兩種的檢索表。

關鍵詞：糞生、絲殼菌屬、不整子囊菌類、臺灣。

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