行政院國家科學委員會專題研究計畫成果報告

台灣枯枝敗葉上絲孢綱真菌分類學之研究
Taxonomic study on Hyphomycetes from litters of Taiwan

計畫類別:個別型計畫

計畫編號:NSC89-2313-B-041-015

執行期間:89年8月1日至90年7月31日

計畫主持人:陳金亮(城秝)

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摘要：進行為期一年的台灣枯枝敗葉上絲孢綱真菌分類學的研究，共有三十七種絲孢綱真菌被鑑定，其中包括二十三種為台灣已知種，十三種為台灣新記錄種，一種為世界性新種以及兩株未鑑定種。菌種均採集自台灣本土各地之枯枝落葉，經純化培養後所獲得。台灣新記錄種與世界性新種除完成鑑定及乾標本製作保存外，亦完成菌種的描述、繪圖及照像等工作。而所分離的菌株將置放保存在新竹食品工業研究所菌種中心，以便提供國內相關之學術單位或產界作更進一步的開發利用。乾標本則放置於台中國立自然科博物館及嘉南藥理科技大學醫管系。

關鍵字：絲孢綱真菌、分類學、枯枝敗葉、臺灣

Abstract: A taxonomic study on Hyphomycetes from litters of Taiwan was conducted from August, 2000 to July, 2001. Thirty seven mitosporic fungi are described, illustrated and photographed from forest litter in Taiwan. They include one new species and thirteen new recorded species. In addition, twenty-three recorded species and two unidentified species were recognized. Samples of these fungi were mainly from various decayed stems, twigs, barks and rotten leaves. All purified strains will be saved in the "Culture Collection and Research Center, Food Industry Research and Development Institute. Hsinchu, Taiwan" for further studies. Dried cultures are deposited in the Herbarium of the Chen-fungus-Collection (Herb. CFC), Herbarium, National Museum of Natural Science, Taichung, Taiwan (Herb. TNM), and in Department of Hospital and Health Care Administration, Chia Nan University of Pharmacy and Science, Tainan, Taiwan, ROC.

Key words: Hyphomycetes, taxonomy, litters, Taiwan.

Introduction

Hyphomycetes are a group of fungi that lack sexual state in their life cycle. They are extensive to distribute in each ecosystem. According to the Ainsworth & Bisby's Dictionary of the fungi attend to current the hyphomycetes of the whole world, about 1,700 genus, 11,000 species are recorded (Hawksworth, *et al.* 1995).

These fungi are of great interest, because informations of these fungi can provide knowledge of mycoflora in Taiwan, their potential ability to cause plant and animal disease, and their potential to produce novel compounds. Because of Taiwan with superior geography position, the weather of the island full year is pleasant as well as copious rain. However, the number and category of these mitosporic fungi are not only numerous, but also biodiversity. The mitosporic fungi of Taiwan have been poorly studied both ecologically and taxonomically. Although totally approxi-mately 900 taxa of hyphomycetes have already been described from Taiwan (It is about share the world to have known species one-tenth weak) by Chen (1992), Chang (1989a,b, 1990, 1991), Hsieh

(1987), Hsieh & Goh (1990), Huang et al. (1992), Liu (1987), Matsushima (1980, 1981, 1983, 1985, 1987), Sawada (1919, 1922, 1928, 1931, 1933, 1942, 1943a, 1944, 1959), Sivanesan & Hsieh (1990), Sun & Han (1971) and Tzean & Chen (1989a,b,c, 1990, 1991, 1992a,b, 1993, 1994), the mitosporic fungi of Taiwan are still largely unknown and undiscovered. Therefore, these plenty of hyphomycetes still are demand explored in this country.

Materials and Methods

The various decayed stems, barks and rotten leaves were collected between August, 2000 to July, 2001 from forests in Taiwan. Material was returned to the laboratory in plastic boxes and examined as soon as possible for associated fungi, or some non-fruiting specimens were incubated for 1-7 d in a moist plastic boxes to promote sporulation. Then under a stereomicroscope, the single spore or mass fungal spores with the microneedle of asepsis to separate establish pure culture. Fungal characteristic and conidiogenesis of the obtained hypho-mycetes were examined by a Leica stereomicroscope (MZ8) and with an Olympus light microscope (BX50), immediately after according to the taxonomic concepts of Barron, Hughes, Tubaki, Ellis and Saccardo take into identification. The identified fungi besides were described, illustrated (with drawing tuble) and photographed (with camera).

Results

Thirty seven mitosporic fungi are described, illustrated and photographed from forest litter in Taiwan. They included one new species *thirteen* new recorded species, twenty three recorded species and two unidentified species were recognized.

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