

# 行政院國家科學委員會專題研究計畫 成果報告

## 台灣絲孢網真菌之分類學研究 研究成果報告(精簡版)

計畫類別：個別型  
計畫編號：NSC 96-2621-B-041-001-  
執行期間：96年08月01日至97年07月31日  
執行單位：嘉南藥理科技大學醫務管理系

計畫主持人：陳金亮

計畫參與人員：此計畫無其他參與人員：

處理方式：本計畫可公開查詢

中華民國 97 年 11 月 20 日

# 行政院國家科學委員會專題研究計畫成果報告

## 臺灣絲孢綱真菌分類學之研究

### Taxonomic study on Hyphomycetes of Taiwan

計畫編號：NSC 96-2621-B-041-001

執行期限：96 年 8 月 1 日至 97 年 7 月 31 日

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#### 一、中文摘要

維期一年的台灣絲孢綱真菌分類學的研究，共有二十五種絲孢綱真菌被鑑定，其中包括五種為台灣新記錄種、十七種為台灣已知種以及三種尚待進一步確認是否為新種。

關鍵詞：絲孢綱真菌、臺灣、分類學

#### Abstract:

A taxonomic study on Hyphomycetes of Taiwan was conducted from August, 2007 to July, 2008. Twenty five mitosporic fungi were identified to genus and where possible species level. They including 5 new record species, 17 record species and 3 unknown species.

Key words: Hyphomycetes, Taiwan, taxonomy

#### 二、Introduction

Hyphomycetes (mitosporic fungi) 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 approximately 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 are plenty of hyphomycetes still to be further explored.

### 三、Materials and Methods

Samples of rotten litters were collected in Taiwan during August, 2005 to July, 2006. Collections were incubated in moist chambers (plastic boxes, 30 X 20 X 12 cm, with three layers of moistened paper) for fungal sporulation. Pure culture was established by inoculating a single spore or spores onto 3% water agar using a sterile glass microneedle. A piece of agar containing isolated spores was transferred to oat meal agar (OMA) slants or plates under a stereomicroscope. Details of fungal characteristics and conidiogenesis were studied, measured, described, illustrated and photographed with Olympus light microscope (BX50) and Olympus stereoscope (SZH ILLB). The taxonomic systems of Barron (1968), Hughes (1953), Tubaki (1963), Ellis (1971) and Saccardo (1882-1931) were used for identification.

### 四、Results

From this study, totally 25 species of Hyphomycetes are described, illustrated and photographed from forest litter in Taiwan. They include 5 new recorded species, 17 recorded species and 3 unknown species. Both live cultures and dried specimens were deposited in the Herbarium of the Chen-Fungus-Collection (Herb. CFC).

### 五、Comments

The basic study mainly focused on the survey, identification and conservation of the precious fungi of natural resources. In

recent years, a number of new species and new record species have published with excellent original illustrations of Hyphomycetes in Taiwan, but there are still many species of Hyphomycetes need to be further explored from this country.

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