

THE INTERESTING AIR-BORNE FUNGUS SPORES

HSI-YEN TSENG⁽¹⁾ and ZUEI-CHING CHEN⁽²⁾

Abstract: Air-borne fungus spores of *Tetraploa aristata* Berk. & Br., *Tetraploa ellisii* Cooke, and *Spegazzinia tessarthra* (Berk. & Curt.) Sacc. are described. These fungi are new records from Taiwan.

INTRODUCTION

During routine studies on air-borne fungal spora of Taitung and Pingtung areas, using Hirst spore-trap (slides smeared with glycerine jelly and exposed to the air which was drawn at 10 litres/min through a feather edged 14×2 mm orifice), we found the interesting fungus spores of *Tetraploa aristata* Berk. & Br., *Tetraploa ellisii* Cooke, and *Spegazzinia tessarthra* (Berk. & Curt.) Sacc. We could not trace any previous records of these fungi from Taiwan (The Plant Protection Society, 1979; Matsushima, 1980) and thus reports their presences. The following descriptions are exclusively drawn from slide studies.

1. *Tetraploa aristata* Berk. & Br., 1850, Ann. Mag. Nat. Hist., 2, 5:459.

Conidia solitary, dry, brown, verruculose, muriform, 3-4 columns, with 4 cells to each column, 25-27.5×15-17.5 μ , with septate appendage 21.5-82.5 μ long, 3-8 μ thick at the base, 2-3 μ thick at the apex. A second type of conidium was collected on July 23, with 2 cells to each column, 15×12 μ , with appendages 100-110 μ long, 4-5 μ thick at the base, and 1-2 μ at the apex.

Distribution: Taiwan, Mainland China, Hong Kong, Philippines, Malaya, India, Nepal, Pakistan, New Guinea, New Britain, New Caledonia, Fiji, Bolivia, Venezuela, Cuba, Jamaica, Sabah, Uganda, Ghana, Sierra Leone, Europe. (Ellis, 1971; Tai, 1979; Yokoyama & Tubaki, 1973).

Slides examined: TAITUNG: Taitung Agriculture Experiment Station, May 23, June 2, June 13, June 21, 1982. PINGTUNG: Pingtung Banana Research Institute, May 12, June 4, July 12, July 23, 1982. The slides are deposited at mycological Laboratory, Botany Department, National Taiwan University.

2. *Tetraploa ellisii* Cooke, 1879, apud Cooke & Ellis in Grevillea, 8:12.

Conidia often verrucose at the base only, 4 columns, with 5-7 cells to each column, 30-37.5×15-17.5 μ , with septate appendage 17.5-40 μ long, 7.5 μ thick at the base, 2.5-3.5 μ thick at the apex.

Distribution: Taiwan, Japan, New Guinea, U. S. A., Argentina, Rhodesia. (Ellis, 1971; Matsushima, 1971; Matsushima, 1975; Yokoyama & Tubaki, 1973).

Slides examined: PINGTUNG: Pingtung Banana Research Institute, Feb. 5, March 27, April 10, July 23, 1982. The slides are deposited at the Mycological Laboratory, Botany Department, National Taiwan University.

3. *Spegazzinia tessarthra* (Berk. & Curt.) Sacc., 1886, Syll. Fung., 4:758.

Conidium with 4 cells, 20 μ diameter excluding spines which are 5 μ long. Conidiophore

(1) 曾禮燕, Instructor, Department of Botany, National Taiwan University.

(2) 陳瑞青, Professor, Department of Botany, National Taiwan University.

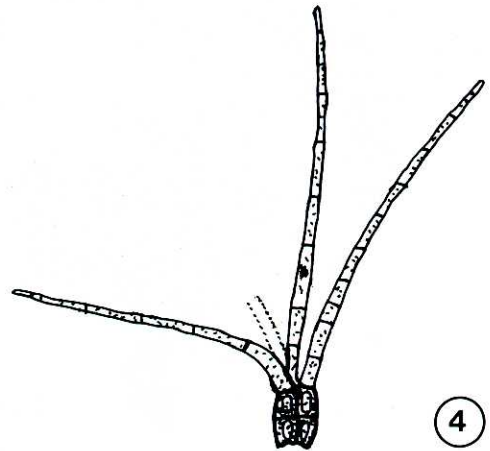
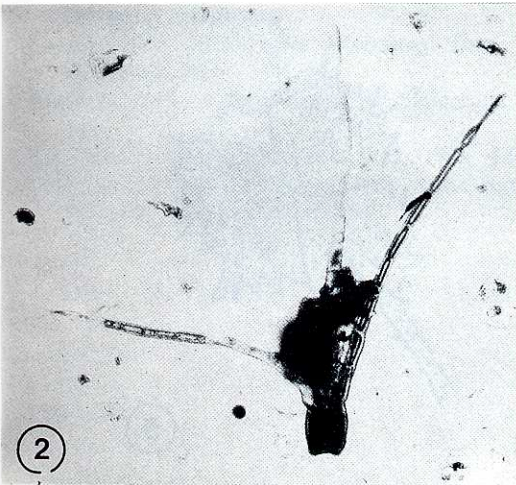
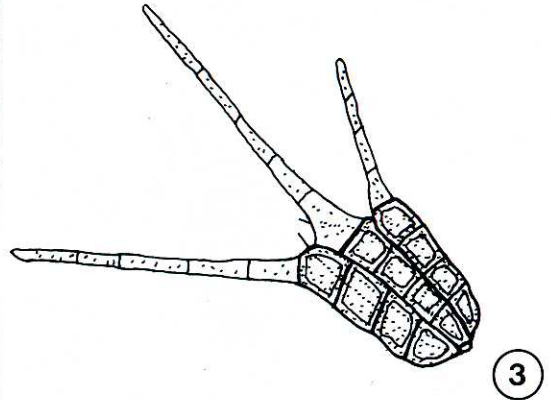
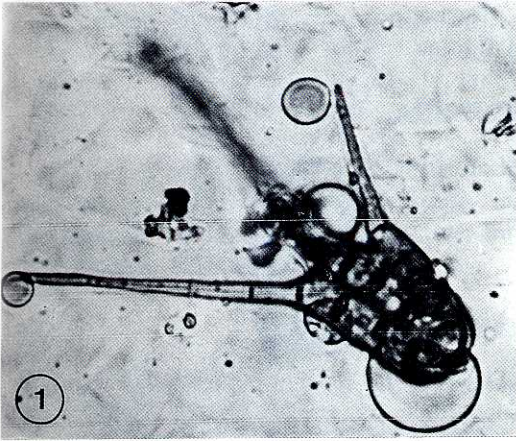
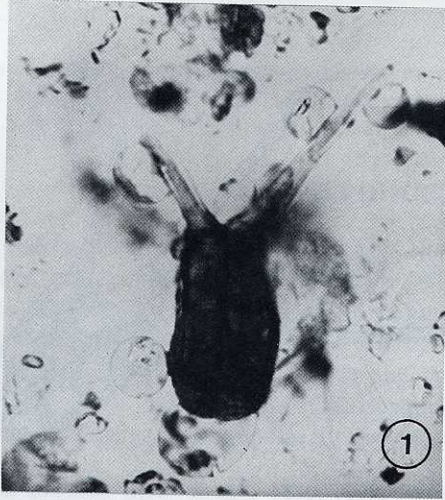


Plate 1

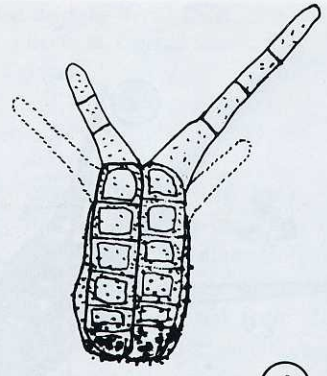
Figs. 1-4. *Tetraploa aristata*.

1 & 3. Conidium (with 4 cells to each column), $\times 1020$.

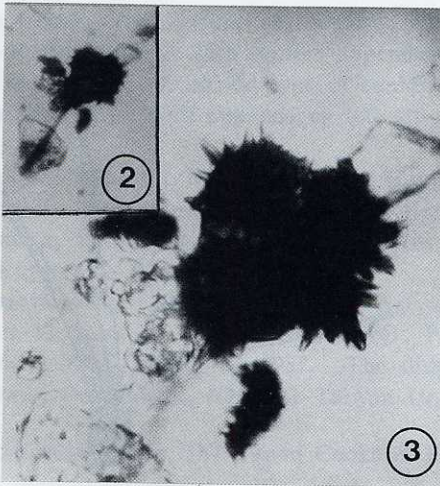
2 & 4. Conidium (with 2 cells to each column), $\times 480$.



1

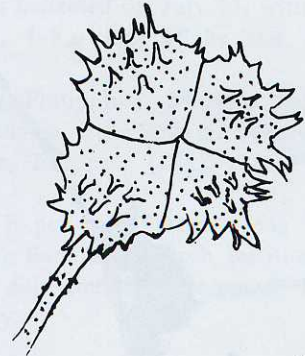


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3



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Plate 2

Figs. 1 & 4. *Tetraploa ellisii*: Conidium, $\times 1072$.

Figs. 2, 3 & 5. *Spegazzinia tessarthura*.

2. Conidium, $\times 335$; 3 & 5. Conidium, $\times 1072$.

(1) W. H. H. Hsu, Institute of Botany, National Taiwan University.

(2) W. H. H. Hsu, Institute of Botany, National Taiwan University.

with conidium 2.5μ thick.

Distribution: Taiwan, Malaya, India, Australia, New Guinea, U. S. A., Venezuela, Trinidad, Sudan, Ghana, Kenya, Sierra Leone, Tanzania, Uganda, Zambia. (Ellis, 1971).

Slide examined: TAITUNG: Taitung Agriculture Experiment Station, April 20, 1982.

The slide is deposited at Mycological Laboratory, Botany Department, National Taiwan University.

Notes: The authors are continuously investigating the probable host plants in these areas in order to find the natural habitats of these fungi.

ACKNOWLEDGEMENT

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