

Short Communication

***Apiosordaria striatispora*, an endophyte of *Mesua ferrea* and *Prunus arborea* from Thailand**Kevin D. Hyde¹⁾, S. W. Wong¹⁾, Saisamorn Lumyong²⁾ and Pipob Lumyong³⁾¹⁾ Department of Ecology and Biodiversity, The University of Hong Kong, Pokfulam Road, Hong Kong, China²⁾ Department of Biology, Chiang Mai University, Thailand³⁾ Department of Plant Pathology, Chiang Mai University, Thailand

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***Apiosordaria striatispora* isolated as an endophyte of *Mesua ferrea* and *Prunus arborea* is described, and illustrated with interference contrast light micrographs and scanning electron micrographs.**

Key Words—endophyte; fungi; Sordariales; systematics.

In a study of the endophytes occurring on seedlings of native trees at Doi-Suthep Pui National Park, near Chiang Mai, we isolated an ascomycete with unitunicate asci and brown bullet-shaped ascospores. This ascomycete readily produced ascomata in culture and therefore we were able to carry out a study of its morphology and examine the species at the SEM level. The isolate is identified as *Apiosordaria striatispora* (Furuya & Udagawa) Guarro (Sordariales) (Guarro and Cano, 1988).

Materials and Methods

Seedlings about 1 yr old were obtained from the Forest Restoration Research Unit, CMU, at Doi-Suthep Pui National Park. These were grown beneath existing forest from seeds collected on the forest floor. Random sections were cut from the leaf and stem samples in the laboratory, and these were surface-sterilized in 70% alcohol (1 min), sodium hypochlorite (5.25% available free chlorine, 3 min), to kill any superficial fungal spores or mycelium and then washed in distilled water. These were then plated onto cornmeal agar and treated as in other endophytes studies. All measurements were made in water. Material was fixed for SEM following the method of Read et al. (1995).

Results and Discussion

Apiosordaria striatispora (Furuya & Udagawa) Guarro, Trans. Br. Mycol. Soc. **91**: 589. 1988. Figs. 1–17
≡ *Triangularia striatispora* Furuya & Udagawa, J. Jpn. Bot. **51**: 407. 1976.

Colonies fast growing, reaching 5 cm in diam in 5 d at room temperature (22°C) on PDA, with superficial scant white cottony mycelium, discoloring media pale brown, with ascomata forming in concentric rings. As-

comata immersed in agar, or superficial amongst aerial mycelium; no anamorph produced (Fig. 1). Ascomata 150–200 µm high, 110–150 µm in diam, lenticular, pyriform; ostiole central (Figs. 2, 3). Peridium comprising several layers of somewhat angular cells. Paraphyses 2.5–3 µm wide at the base, hypha-like, septate, hyaline, numerous, tapering distally, not embedded in a gelatinous matrix. Asci 90–120 × 10–12 µm, 8-spored, cylindrical, pedicellate, thin-walled, unitunicate, with a narrow refractive apical ring (Figs. 4, 5). Ascospores 12–16 × 7–9 µm, uniseriate, bullet-shaped, comprising an apical brown cell, with up to 6 longitudinal furrows, with a small apical protuberance in some, and a germ pore at the end, and a smaller basal irregular hyaline cell (Figs. 6–17).

Material examined: Thailand, Moug, Chiang Mai, at Doi-Suthep Pui National Park, seedling nursery of Forest Restoration Research Unit, CMU, isolated from young seedlings of *Mesua ferrea* and *Prunus arborea*, Oct. 1996, P. Lumyong (HKU(M) 1501).

The specimen isolated here as an endophyte is identical to the excellent description of *A. striatispora*, originally isolated from soil in Thailand and Malaysia (Furuya and Udagawa, 1976). The nature of the wall striations is illustrated at the SEM level (Figs. 15–17).

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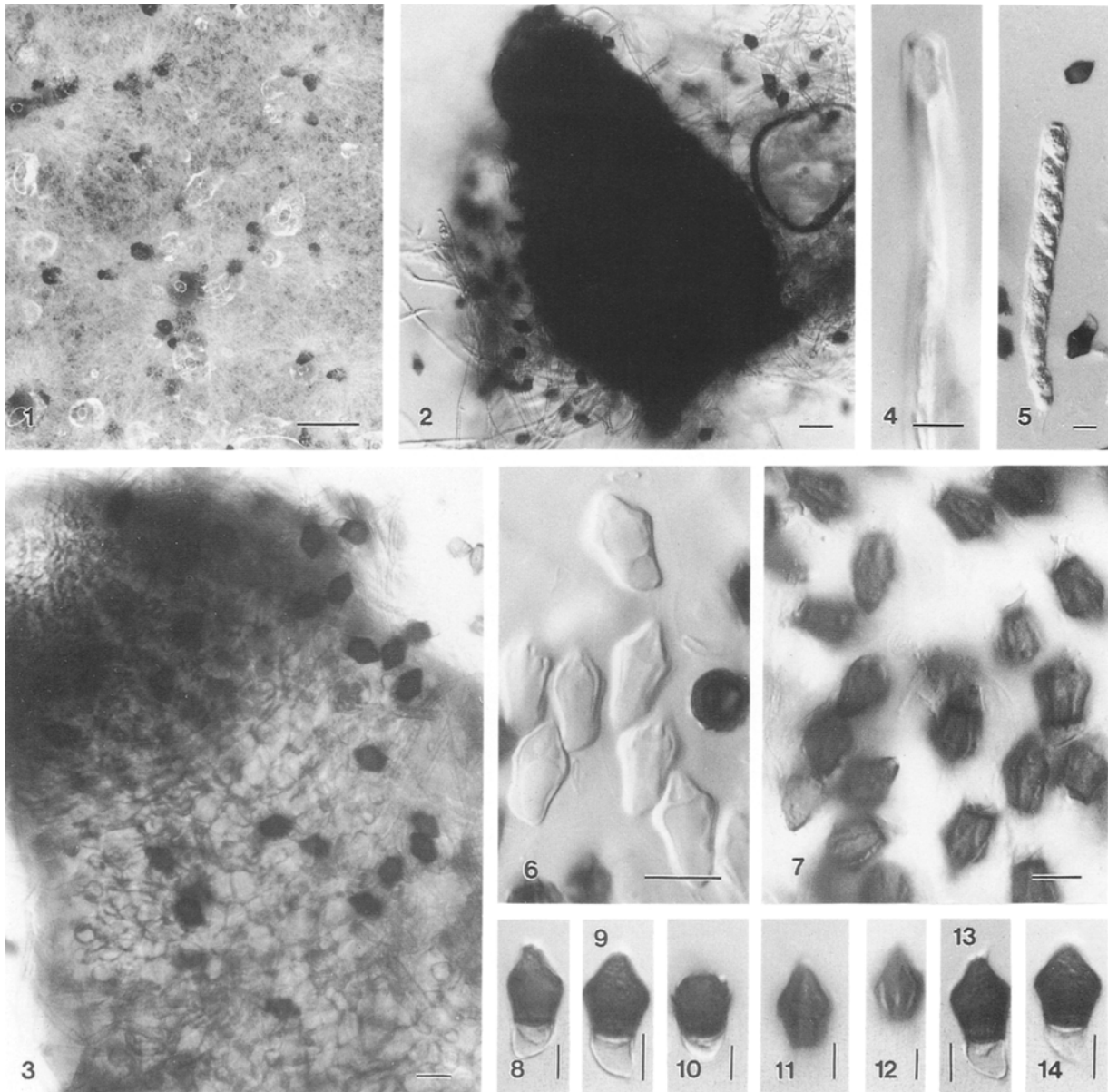
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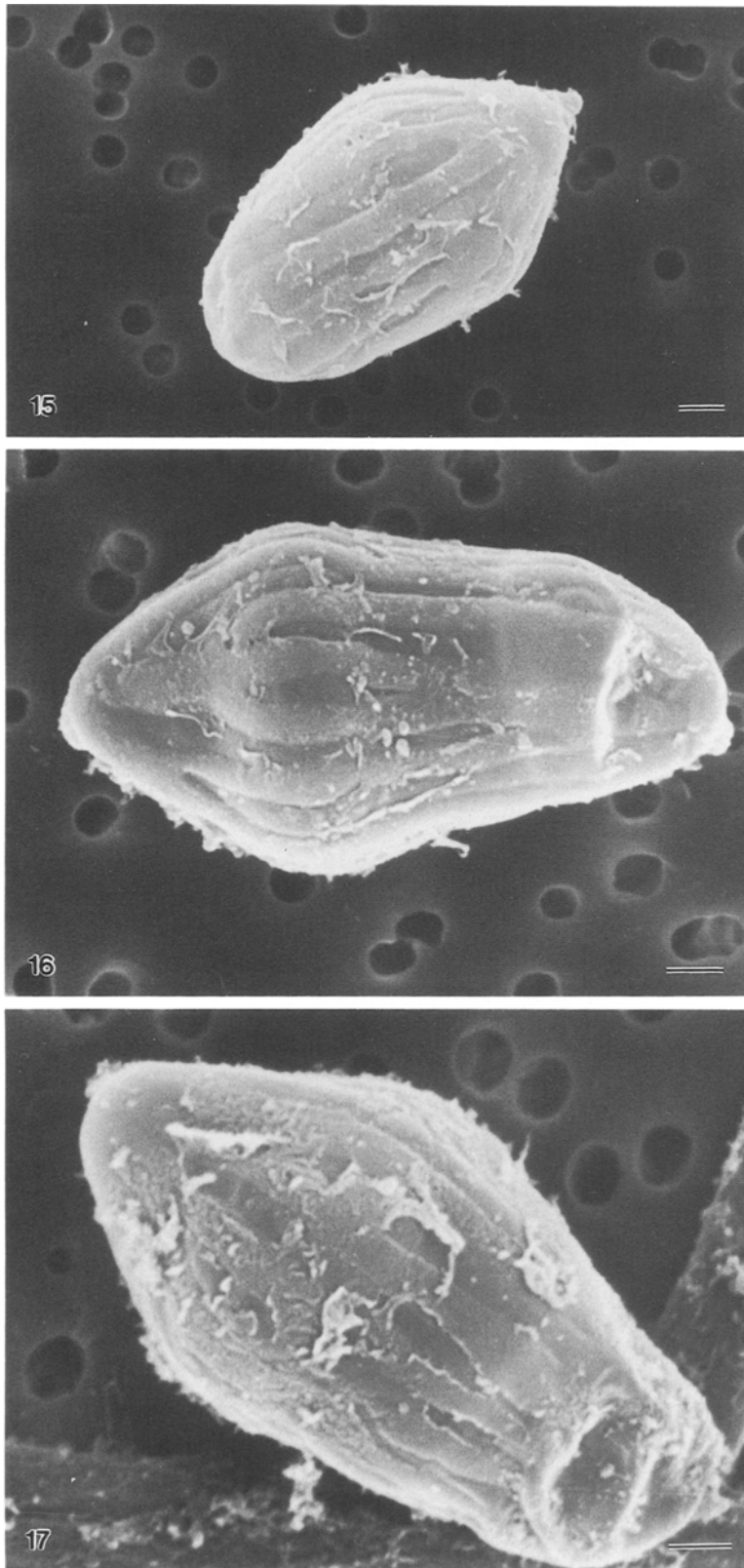
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Ultrastructure of asci and ascospores of two marine fungi:

Swampomyces armeniacus and *Marinosphaera mangrovei*.
Mycol. Res. **99**: 1465–1471.



Figs. 1–14. *Apiosordaria striatispora*.

1. Ascomata on agar surface. 2. Ascoma. 3. Cells of peridium and neck. 4, 5. Asci. Note the apical ring. 6. Immature ascospores. 7–14. Ascospores. Note the wall striations, hyaline basal cell, and apical germ pore. Bars: 1 = 500 μm ; 2 = 20 μm ; 3–7 = 10 μm ; 8–14 = 5 μm .



Figs. 15–17. *Apiosordaria striatispora*.
Scanning electron micrographs. Note the wall striations. Bars = 1 μ m.