

Short Communication

Sporidesmium filiferum from Tsukuba, Japan

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Accepted for publication 31 July 1996

***Sporidesmium filiferum* isolated from a leaflet of *Phellodendron amurense* lying on the soil surface at Tsukuba, Japan is described together with photomicrographs.**

Key Words—Dematiaceae; Deuteromycotina; taxonomy.

In the course of an etiological study of a leaf disease of *Phellodendron amurense* Ruprecht in Japan, leaves that had fallen to the ground in the previous week were collected and examined for the presence of potentially pathogenic fungi. Whole leaflets were placed on water agar in 9-cm-diam Petri dishes and incubated for 10 d at 25°C. A dematiaceous hyphomycete belonging to the genus *Sporidesmium* Link: Fr. sporulated on the edge of one such leaflet.

Sporidesmium is characterized by single phaeo-fragmospores borne terminally on macronematous, mononematous, simple conidiophores with monoblastic, integrated, terminal, determinate or percurrent conidiogenous cells (Ellis, 1971). Among a total of 72 species of *Sporidesmium* compiled by Ellis (1971, 1976), only 2 species, *S. ellisii* Pirozynski and *S. filiferum* Pirozynski, are known to have conidia with a single, terminal, filiform appendage. Both species can be readily differentiated. *Sporidesmium ellisii* forms 4–5-septate conidia (40–90 µm long) that have a rather short, straight appendage, while *S. filiferum* forms shorter (28–35 µm long), 7–8-septate conidia with a rather long, filiform cellular appendage.

Although the fungus isolated from *Phellodendron* could be identified as *S. filiferum*, little information is available on the morphology and characteristics of this species in artificial culture. Therefore, *S. filiferum* is redescribed and illustrated in this report.

***Sporidesmium filiferum* Pirozynski, Mycol. Pap. 129: 55–57. 1972. Figs. 1–9**

Colony on potato-dextrose agar (PDA, Fig. 5) after 10 d at 25°C, 4.5–5 mm in diam, dark grayish green, aerial hyphae short and colony surface flat and velutinous; reverse dark green to almost black. Average colony diam (mm) of 10-d-old cultures 2.5, 4.8, 2.7, and 2.4, at the respective temperatures of 22, 25, 28, and 31°C. Mycelium superficial and immersed, composed of branched, septate, subhyaline to brown, smooth-walled, 2–3 µm wide hyphae. Conidiophores (Figs. 1–3, 8) macro-

nematous, mononematous, subhyaline or brown, simple, 1–4-septate, (25–)32.5–72.5(–130) µm long, 2–4.5 µm wide where cylindrical. Conidiogenous cells (Figs. 1–3, 8) integrated, terminal, monoblastic, holoblastic, percurrently or sympodially proliferating, subhyaline or brown, smooth, cylindrical. Conidia (Figs. 1–4, 6–9) solitary, acropleurogenous, ellipsoidal to long-fusiform, rarely curved, mostly 7–8-septate, guttulate or eguttulate, 27.5–41.3 × 7.5–10 µm, brown, hyaline or subhyaline in one to two cells of both ends, smooth, mostly truncate at base, 3–4.5 µm wide, with a filiform, straight or curved cellular appendage usually from the apical, rarely from the subapical cell (Fig. 1, extreme right); appendages (Figs. 1–4, 6, 7) hyaline, usually aseptate, rarely 1–2-septate basally, 87.5–137.5 × 0.5–1 µm.

Hab.: From a fallen leaflet of *Phellodendron amurense* on the soil surface, Tsukuba, Ibaraki, Japan. Also known from leaf litter in Tanzania (type; Pirozynski, 1972); and from Taiwan (Matsushima, 1983) on dead leaves of *Mucuna ferruginea* Matsum. and *Liparis viridiflora* Lindl. (as '*viridifolia*') and dead leaves and twigs of *Litchi chinensis* Sonn.

Material: Japan. Honshu; Ibaraki, Tsukuba, Minaminakazuma, culture from a fallen leaflet of *Phellodendron amurense* collected from the soil surface, 30 Aug. 1995, T. Watanabe TW 95-2 (dry culture, Forestry and Forest Products Research Institute, FFPRI). A living culture is deposited at the Herbarium, National Institute of Biological Resources, Ministry of Agriculture, Forestry and Fisheries (MAFF) at Tsukuba, Ibaraki, Japan as MAFF 425595.

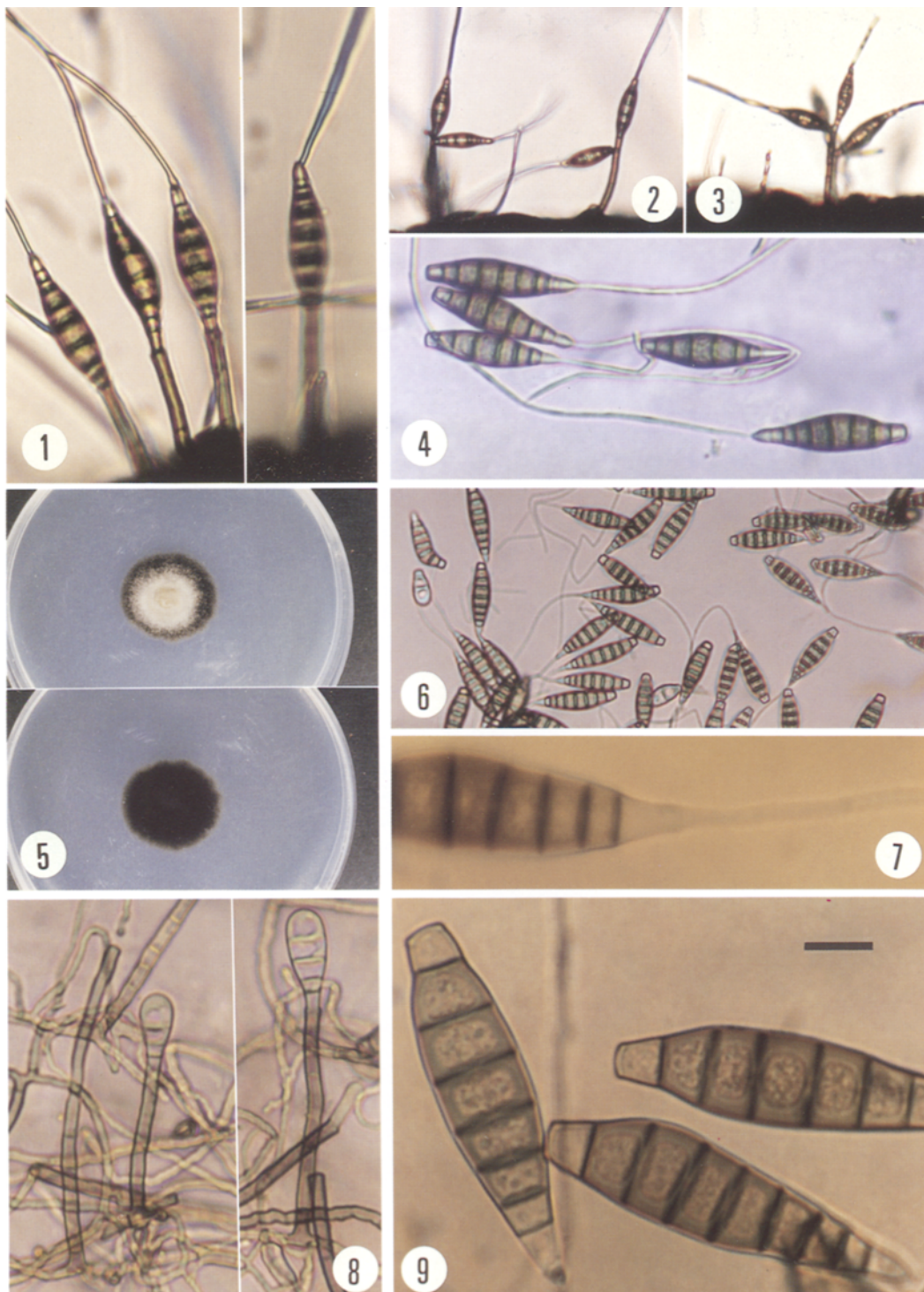
The genus *Phaeotrichoconis* Subraman. resembles *Sporidesmium* morphologically by forming single phaeo-fragmospores borne terminally on erect simple conidiophores (Ellis, 1971, 1976; Subramanian, 1956). Conidia of the former are enteroblastic and tretic, but those of the latter are holoblastic, and truncate basally.

The gross morphology of *S. filiferum* in nature (Figs. 1–4) is almost identical to that in agar culture (Figs. 6–9).

Single conidia on conidiophores are most common, but two or three conidia occur occasionally (Figs. 2, 3).

In agar cultures, various stages including immature

few-septate conidia without apical appendages were also observed (Figs. 6, 8). The detachment of a terminal appendage of mature conidia was noted by Matsushima



Figs. 1-9. *Sporidesmium filiferum* on a *Phellodendron amurense* leaflet placed on water agar (1-4), and on PDA culture (5-9). 1-3, 8. Conidiophores bearing conidia. Note a conidium with subapical development of appendage (1, extreme right), and conidiophores bearing two (2), and three conidia (3). 4, 6, 9. Detached conidia. Note the truncate base and apical appendage. 5. Thirty-d-old colonies (above, surface; below, reverse) at 25°C on PDA in 9-cm plastic Petri dishes. 7. A part of conidium with an apical two-septate appendage. Scale bar: Figs. 1, 4=15 μm ; 2, 3, 6=30 μm ; 7-9=6 μm .

(1983) and was also observed in this study.

Acknowledgement—I wish to thank Dr. Gary J. Samuels, USDA-ARS, U.S.A. for reviewing the manuscript.

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