

Short Communication

Materials for the fungus flora of Japan (53)*

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Two interesting ascomycetes are described as new to Japan: *Ascotricha amesii* (Xylariaceae), isolated from garden soil in Osaka; and *Auxarthron reticulatum*, isolated from forest soil in Tokyo. A *Dicyma* anamorph is associated with the former species.

Key Words—ascomycetes; *Ascotricha*; *Auxarthron*; Japan; soil fungus.

113. *Ascotricha amesii* D. Hawksworth, Mycol. Pap. 126: 8. 1971. Fig. 1

Colonies on potato-carrot agar (PCA) growing rather rapidly, attaining a diam of 21–22 mm in 14 d at 25°C, velvety to somewhat cottony, plane or zonate, consisting of a thin basal felt, producing abundant black ascomata, Dark Green (M. 25F4-3, after Kornerup and Wanscher, 1978) or Olivaceous Black (Rayner, 1970); conidiogenesis moderate; reverse Dull Green to Dark Green or Greenish Grey (M. 25E3, 25F4-2). Colonies on oatmeal agar (OA) growing as on PCA but more compact-textured, more or less floccose, producing abundant ascomata and conidia, Dark Turquoise to Dark Green (M. 24–25F4) or Greenish Grey (R); reverse Greyish Yellow (M. 4B4) or Ochraceous (R).

Ascomata scattered, often intermixed with conidiophores, ostiolate, black, ovoid or pyriform, 90–150 × 60–100 μm, hairy, with a short conical or cylindrical neck measuring 20–50 × 15–40 μm; peridium thin, dark brown, membranaceous, of textura angularis, with outer layer consisting of dark brown, thick-walled, angular cells measuring 4–12 × 4–10 μm. Terminal hairs arcuate, rigid, 2–6 branched, dark brown to black, 160–240 μm long, 4–6 μm in diam near the base, septate, thick-walled, smooth or partially roughened, terminating in a hyaline, narrow, curved or circinate tip; short sterile branches hyaline, ampulliform. Lateral hairs similar but a few times geniculate, often curved backwards. Ascii 8-spored, cylindrical, 45–55 × 6–8 μm, short-stipitate, thin-walled, without apical apparatus; paraphyses lacking. Ascospores uniseriate or irregularly uniseriate, dark olivaceous brown, discoid but somewhat irregular, 6–9 × 6–8 × 3–5 μm, sometimes subapiculate at both ends, with a lateral germ slit up to the entire length.

Anamorph: *Dicyma* sp. Conidiophores arising from the basal mycelium or aerial hyphae, erect, simple or irregularly branched; stipes pale brown to dark brown, 20–120 × 2–3 μm, septate, smooth, above paling; conidiogenous cells polyblastic, integrated, produced as the terminal part of unbranched conidiophores or branches of the conidiophores, subhyaline to pale olivaceous brown, geniculate, denticulate, 20–200 × 1.5–4 μm, with very short, thin-walled separating cells (denticles). Conidia hyaline to pale brown, pyriform to ovoid or ellipsoidal, 4–6 × 3–4 μm, truncate at the base, smooth to asperulate.

At 37°C, colonies are similar to those at 25°C in growth rate but characterized by profuse production of conidia.

Distribution: Congo, Japan. This was apparently known only from the original Congolese collection (Ames, 1963).

Specimen examined: SUM 3129, a dried culture isolated from garden soil attached to a stone wall of Osaka Castle, Higashi-ku, Osaka-shi, Japan, 14 August 1995, col. S. Uchiyama. The dried specimen has been deposited with the Natural History Museum and Institute, Chiba, Japan (CBM).

Note: *Ascotricha lusitanica* R. Kenneth resembles this species on the basis of the shape and size of ascospores and conidia, but does not have the characteristically arcuately curved terminal hairs of *A. amesii* (Hawksworth, 1971).

114. *Auxarthron reticulatum* (Zukal) Orr et Plunkett, Can. J. Bot. 41: 1443. 1963; Currah, Mycotaxon 24: 150. 1985. Fig. 2

≡ *Gymnoascus reticulatus* Zukal, Verh. Zool. Bot. Ges. Wien 37: 40. 1887 (basonym).

Colonies on PCA growing more or less restrictedly, attaining a diam of 18–20 mm in 14 d at 25°C, floccose, plane, thin, with submerged vegetative mycelium and

* (52): Tubaki, K., Tokumasu, S. and Konno, M., Nippon Kinogakukai Kaiho 38: 249–250. 1997.

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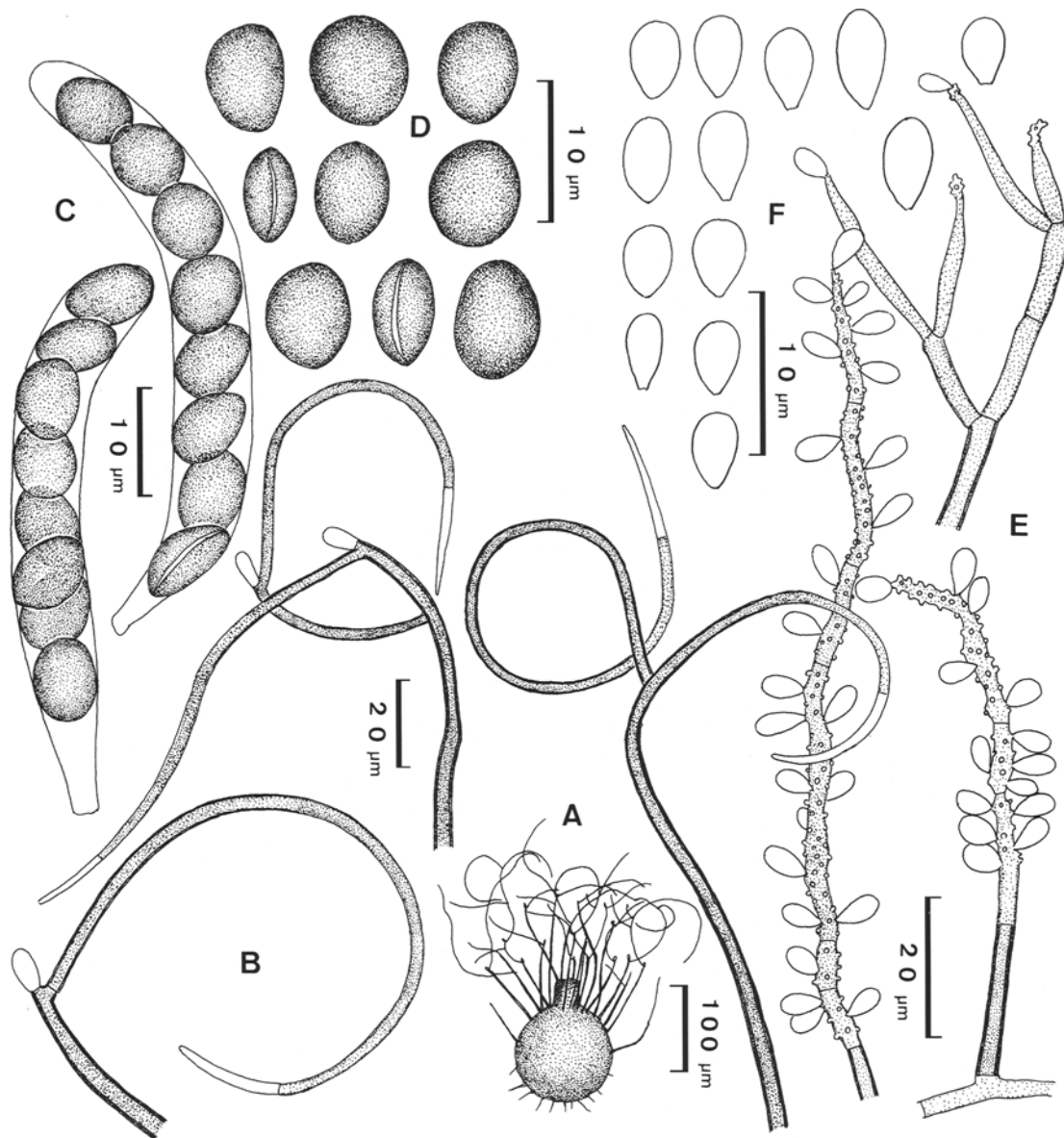


Fig. 1. *Ascotricha amesii* (SUM 3129).

A. Ascoma. B. Terminal hairs. C. Asci. D. Ascospores. E. Conidiogenous cells and conidia. F. Conidia.

loose aerial hyphae, producing abundant ascomata and limited conidia, Brownish Orange (M. 6C5) or Cinnamon (R), becoming Brown (M. 7E5) or Fawn (R) in age; reverse Brown (M. 7E4) or Dark Brick (R). Colonies on phytone yeast extract agar (PYE) growing rapidly, attaining a diam of 34–35 mm in 14 d at 25°C, plane, consisting of a tough basal felt, producing scattered ascomata on the felt, Light Orange to Greyish Brown (M. 5A4-D3); conidiogenesis limited, not affecting the colony appearance; reverse Brownish Orange (M. 6C6) or Ochreous (R).

Ascomata scattered or often confluent, globose to subglobose, 125–350 µm in diam excl. appendages, brown, with a light yellowish brown centrum. Peridial hyphae orange-red to brownish red, thick-walled, finely

asperulate, septate with knuckle-joints, branched and anastomosed to form a reticuloperidium, apices truncate or forming short appendages; appendages spine-like, 12–30 × 2–2.5 µm, thick-walled, asperulate to finely asperulate, aseptate or a few septate, with a rounded apex. Asci 8-spored, subglobose to pyriform, 9–12 × 7.5–10.5 µm, short-stipitate, evanescent. Ascospores hyaline to pale yellowish brown, globose to subglobose, 3–3.5(–4) µm in diam, finely reticulate.

Vegetative mycelium consisting of hyaline, branched, septate, thin and smooth-walled, 1–3 µm diam hyphae; racquet hyphae present; arthroconidia hyaline, cylindrical, smooth-walled.

Weakly cellulolytic.

At 37°C, growth is nil.

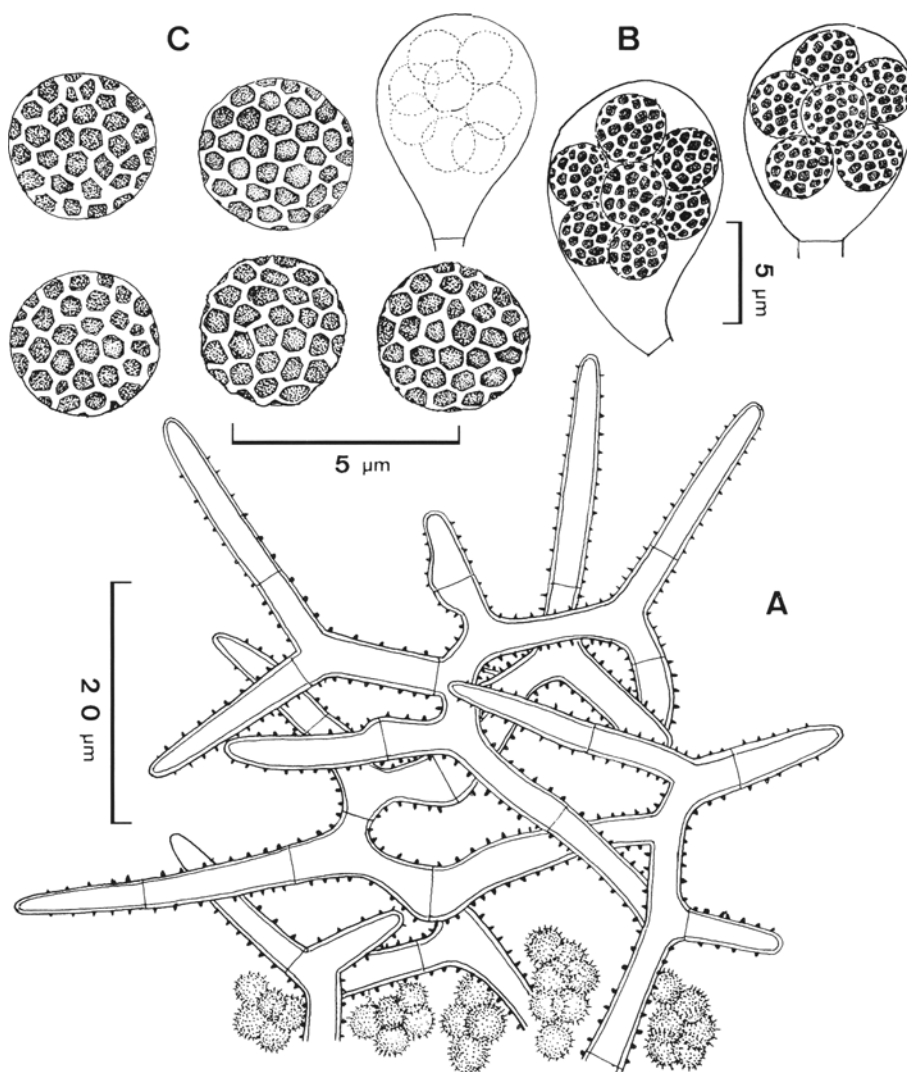


Fig. 2. *Auxarthron reticulatum* (SUM 3148).

A. Margin of ascoma showing appendages. B. Asci. C. Ascospores.

Distribution: Austria, UK, Sweden, Spain, USA, Mexico, Brazil, Japan.

Specimen examined: SUM 3148; a dried culture isolated from forest soil, Fukiage Gyoen, the Imperial Palace, Chiyoda-ku, Tokyo, Japan, 20 March 1998, col. S. Udagawa and S. Uchiyama. The dried specimen has been deposited with CBM.

Note: *Auxarthron reticulatum* can be distinguished readily by the absence of elongate ascomatal appendages from all other species of the genus with the sole exception of *A. zuffianum* (Morini) Orr et Kuehn (Orr et al., 1963; Currah, 1985). The ascomata of both species have short appendages, but those of *A. zuffianum* are longer (up to 85 µm) and more acutely pointed.

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