

***Anthostomella eucalyptorum* Crous & M.J. Wingf., sp. nov.****Mycobank:** MB501012.**Anamorph:** *Idriella*-like.**Etymology:** Named after its host, *Eucalyptus*.**Latin diagnosis:** *Anthostomellae eucalypti* similis, sed ascosporis minoribus, (7–)8–9(–10) × 4–5(–5.5) µm, differens.

**Description:** *Leaf spots* medium brown, subcircular with a raised, thin border and narrow, red-purple margin, up to 8 mm diam; frequently merging with *Mycosphaerella* leaf spots which are darker brown in colour. *Ascomata* hypophyllous, solitary to aggregated, ostiolar region papillate, black, shiny, globose, up to 200 µm diam; wall consisting of 3–4 layers of brown *textura angularis*. *Clypeus* black, up to 250 µm wide. *Paraphyses* hyaline, septate, up to 6 µm wide, intermingled between asci, but not exceeding them in length, up to 60 µm long, dissolving in older ascomata. *Asci* 8-spored, cylindrical, 60–85 × 5–6 µm, stipitate, unitunicate, with a bluntly rounded apex, and a J+, cylindrical-shaped apical ring. *Ascospores* uniseriate, ellipsoid, smooth-walled, with a central guttule, consisting of a larger brown cell, (7–)8–9(–10) × 4–5(–5.5) µm, and a smaller, hyaline, basal dwarf cell, 1.5–2 µm long and wide, lacking a mucus sheath and germ slit. *Colonies* fertile when inoculated onto sterile pine needles placed on water agar, forming an *Idriella*-like anamorph. *Conidiophores* erect, bearing apical clusters of conidia held together in mucus; conidiophores initially hyaline, becoming brown with age, 2–4-septate, subcylindrical, mostly curved, 20–60 × 3–4 µm; older conidiophores rejuvenating percurrently. *Conidiogenous cells* apical, polyblastic, proliferating sympodially, 10–20 × 3–3.5 µm. *Conidia* hyaline, falcate, smooth, base truncate, apex acutely rounded, 20–25 × 1.5–2 µm.

**Cultural characteristics:** *Colonies* on 2 % potato-dextrose agar<sup>1</sup> (Difco) flat, spreading, mostly lacking aerial mycelium, cream-coloured, central part at times with moderate whitish aerial mycelium; margins regular, but somewhat feathery.

**Typus:** **Indonesia**, Northern Sumatra, on leaves of *Eucalyptus* sp., Feb. 2004, collected by M.J. Wingfield, CBS-H 19727, **holotypus**; cultures ex-type CPC 11023 = CBS 120036, CPC 11024–11025.

**Notes:** Two species are presently known on *Eucalyptus* that resemble *A. eucalyptorum*. In both cases these taxa have larger ascospores, namely 11.5–14 × 5–6.5 µm in *A. clypeoides* Rehm, and 14.5–17.5 × 5.5–8 × 3–5 µm in the case of *A. eucalypti* H.Y. Yip (which also has a basal dwarf cell)<sup>2</sup>. Very few species of *Anthostomella* Sacc. have been studied in culture. Anamorphs of *Anthostomella* include *Nodulisporium* Preuss, *Geniculosporium* Chesters & Greenh., and *Virgariella* S. Hughes<sup>2</sup>. This is the first report of an *Idriella*-like anamorph for the genus, which was induced on sterile pine needles placed on 2 % water agar.

BLASTn results of the ITS sequence of *A. eucalyptorum* did not retrieve any close hits, with most hits being unidentified fungal endophytes. The partial 28S rRNA gene sequence (GenBank DQ890026) placed *A. eucalyptorum* with members of the *Xylariaceae*, for example *Xylaria acuta* Peck (AY544676), *X. hypoxylon* (L.) Grev. (AY544648), and *Rosellinia necatrix* Berl. ex Prill. (AY083824).

**Colour illustrations:** *Eucalyptus* plantation in Indonesia (M.J. Wingfield); ascomata with black clypei; asci and ascospores; conidiophores and conidia of *Idriella*-like anamorph (P.W. Crous). Scale bars = 250, 20, 10 & 10 µm.

**References:** <sup>1</sup> Gams W, Hoekstra ES, Aptroot A (eds) (1998). *CBS course of mycology* 4<sup>th</sup> ed. Centraalbureau voor Schimmelcultures, Baarn, Delft, Netherlands. <sup>2</sup> Lu B, Hyde KD (2000). A world monograph of *Anthostomella*. *Fungal Diversity Research Series* 4: 1–376.

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