

Phyllosticta aristolochiicola



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***Phyllosticta aristolochiicola* R.G. Shivas, Y.P. Tan & Grice, sp. nov.**

Etymology. Name derived from the host plant genus, *Aristolochia* (*Aristolochiaceae*).

Leaf spots amphigenous, circular, up to 1 cm diam, grey to pale brown, solitary, surrounded by a slightly raised black border about 1 mm wide; centres of lesions often tear or fall out producing symptoms of shot-hole. *Conidiomata* pycnidial, mostly epiphyllous, black, solitary, unilocular, globose, 40–70 µm diam, erumpent; wall composed of layers of *textura angularis*, outer layer dark reddish brown. *Conidiophores* reduced to conidiogenous cells or with a supporting branched cell. *Conidiogenous cells* terminal, hyaline, smooth, subcylindrical to ampulliform, 10–20 × 2–4 µm. *Conidia* globose, subglobose, broadly ellipsoidal or obovoid, with a truncate base and rounded apex, hyaline, 7–16 × 6.5–11 µm, aseptate; wall uniformly 0.5–1 µm thick, enclosed in a mucilaginous sheath, with a minute basal frill and an apical hyaline tapered appendage 3–7 µm long. *Teleomorph* not observed.

Culture characteristics — (after 1 wk in the dark and a further 2 wk under 12 h ultraviolet light / 12 h dark cycle, at 23 °C): Colonies on potato-dextrose agar 4 cm diam, flat with no aerial mycelium, olivaceous black (Rayner 1970) with a white-grey, 2 mm entire margin, narrowly zonate towards the margin.

Typus. AUSTRALIA, Queensland, Kuranda, Kennedy Highway, on leaves of *Aristolochia acuminata*, 1 Apr. 2010, K.R.E. Grice & P. Wright (holotype BRIP 53316a; includes ex-type culture), ITS sequence GenBank JX486129, LSU sequence GenBank JX486128; Queensland, Emmagen Creek, Cape Tribulation National Park, 1 Aug. 1993, R.G. Shivas, paratype BRIP 21785, MycoBank MB801322.

Notes — Species of *Phyllosticta* have *Guignardia* sexual morphs, and are common endophytes or pathogens, occurring on a wide range of plant hosts (Glienke et al. 2011). Two species of *Phyllosticta*, *P. aristolochiae* on *A. clematitis* and *P. aristolochiae* (replacement name *P. tassiana*) on *A. sempervirens*, have been described from *Aristolochia*. Neither species was considered a *Phyllosticta* in a more recent revision of the genus (van der Aa & Vanev 2002). Furthermore, the latter name and its replacement name (*P. tassiana*) were both homonyms and thus both are illegitimate (van der Aa & Vanev 2002). *Phyllosticta aristolochiicola* was first collected in north Queensland in 1993 in association with leaf spot and shot-hole of *Aristolochia* (Shivas & Alcorn 1996). Based on a megablast search of NCBI's GenBank nucleotide database, the closest hit using the ITS sequence is *Phyllosticta cordylino-phili* (GenBank AB454357; Identities = 591/612 (97 %), Gaps = 5/612 (1 %)), followed by *Phyllosticta ardisiicola* (GenBank AB454274; Identities = 584/614 (95 %), Gaps = 10/614 (2 %)), and *Guignardia vaccinii* (GenBank JQ936158; Identities = 583/614 (95 %), Gaps = 6/614 (1 %)). Using the LSU sequence, the closest hits are to *Phyllosticta abietis* (GenBank EU754193; Identities = 1311/1328 (99 %), Gaps 0/1328 (0 %)), followed by *Phyllosticta bidwellii* (GenBank DQ678085; Identities = 1299/1313 (99 %), Gaps = 0/1313 (0 %)), and *Phyllosticta minima* (GenBank EU754194; Identities = 1291/1303 (99 %), Gaps = 0/1303 (0 %)).

Colour illustrations. *Aristolochia acuminata* with leaf spots associated with *P. aristolochiicola* at Kuranda, northern Queensland; leaf spot with pycnidia; 3 wk old culture on potato-dextrose agar; conidiophores and conidia; conidia with appendages apparent. Scale bars (from top left to bottom right) = 1 mm, 1 cm, 10 µm, 10 µm.

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