

Cercospora dolichandrae



Fungal Planet 243 – 10 June 2014

***Cercospora dolichandrae* Crous & den Breeÿen, sp. nov.**

Etymology. Named after the host genus from which it was collected, *Dolichandra*.

Leaf spots amphigenous, subcircular, ranging from small specks (1 mm diam) to larger spots (6 mm diam), medium brown, with a raised dark brown border, and diffuse dark brown margin. *Stromata* up to 40 µm diam, immersed, becoming erumpent, substromatal, consisting of brown, pseudoparenchymatal cells that develop into ascomata, up to 70 µm diam, with central ostiole, 10–15 µm diam; wall of 2–3 layers of brown *textura angularis*. *Asci* bitunicate, 8-spored, hyaline, smooth, obovoid, stipitate, with minute apical chamber, 25–30 × 7–9 µm. *Ascospores* multiseriate in asci, guttulate, medianly 1-septate, fusoid-ellipsoidal, widest in middle of apical cell, tapering towards both ends, constricted at septum, 10–12(–13) × (2.5–)3 µm. *Conidiophores* fasciculate (arising from stromata that become ascomatal initials and later fertile ascomata), hyaline, smooth, subcylindrical, rarely branched, 1–2-septate, 20–40 × 3–5 µm. *Conidiogenous cells* terminal, subcylindrical, clavate, hyaline, smooth, 10–20 × 3–4 µm, terminating in several prominent denticles, 1–2 × 1.5 µm; loci truncate, not thickened nor darkened, or very slightly darkened. *Conidia* occurring in branched chains, subcylindrical, 0–1(–3)-septate, (15–)22–45(–70) × 1.5(–2) µm.

Culture characteristics — Colonies reaching 5 mm diam after 2 wk at 22 °C, erumpent with moderate aerial mycelium and even, smooth margins. On PDA, OA and MEA surface pale olivaceous-grey with patches of smoke-grey; reverse olivaceous-grey.

Typus. SOUTH AFRICA, KwaZulu-Natal, Pietermaritzburg, S29°37'50.95" E30°25'51.67", on leaves of *Dolichandra unguiscati* (*Bignoniaceae*), 15 Nov. 2011, A. King (holotype CBS H-21700, culture ex-type CPC 22948 = CBS 138101; ITS sequence GenBank KJ869140, LSU sequence GenBank KJ869197, MycoBank MB808919).

Notes — Although *C. dolichandrae* has a typical mycosphaerella-like sexual morph, the genus *Mycosphaerella* is restricted to taxa with *Ramularia* asexual morphs, and will in future be regarded as synonym of the latter (Verkley et al. 2004, 2013, Crous et al. 2013a, Hyde et al. 2013, Kirk et al. 2013). *Cercospora* on the other hand, is a separate genus in its own right, with appressoria attached to the mesophyll cells of the host plant, subhyaline fascicles of conidiophores giving rise to conidial chains of hyaline conidia with thickened conidial loci that are planate, while those in *Ramularia* are cladospore-like (Kirschner 2009, Braun et al. 2013). Presently, no *Cercospora* or *Ramularia* spp. are known from *Dolichandra unguiscati*, and hence *C. dolichandrae* is introduced to accommodate this taxon. Cultures established from single ascospores and single conidia were identical based on their DNA sequence data, but only produced the asexual morph in culture.

ITS. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the ITS sequence are *Cercospora virgaureae* (GenBank GU214658; Identities = 617/639 (97 %), Gaps = 4/639 (0 %)), *Mycosphaerella areola* (GenBank DQ459084; Identities = 510/537 (95 %), Gaps = 2/537 (0 %)) and *Passalora graminis* (GenBank GU214666; Identities = 605/645 (94 %), Gaps = 13/645 (2 %)).

LSU. Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the LSU sequence are *Cercospora virgaureae* (GenBank GU214658; Identities = 835/843 (99 %), no gaps), *Cercospora pfaffiae* (GenBank JQ990330; Identities = 812/826 (98 %), no gaps) and *Septoria obesa* (GenBank GU214493; Identities = 824/843 (98 %), no gaps).

Colour illustrations. Symptomatic leaves of *Dolichandra unguiscati*; leaf spots, ascoma with asci, conidiophores and conidia. Scale bar = 10 µm.

Pedro W. Crous & Johannes Z. Groenewald, CBS-KNAW Fungal Biodiversity Centre, P.O. Box 85167, 3508 AD Utrecht, The Netherlands;
e-mail: p.crous@cbs.knaw.nl & e.groenewald@cbs.knaw.nl
Alana den Breeÿen, ARC – Plant Protection Research Institute, P. Bag X5017, Stellenbosch 7599, South Africa;
e-mail: DenBreeyenA@arc.agric.za
Anthony King, ARC – Plant Protection Research Institute, P. Bag X134, Queenswood 0121, South Africa;
e-mail: kinga@arc.agric.za