

Cercospora chrysanthemoides



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***Cercospora chrysanthemoides* Crous & W.J. Swart, sp. nov.**

Etymology. Named after the host genus on which it occurs, *Chrysanthemoides*.

Description based on host material, incubated in moist chambers. *Leaf spots* amphigenous, subcircular, 2–10 mm diam, with concentric darker circles, margin dark brown, raised. Sporulation amphigenous, but more prominently hypophyllous. *Mycelium* internal, consisting of branched, septate, smooth, pale brown, 2–3 µm diam hyphae. *Stromata* substomatal, globose, consisting of brown, pseudoparenchymatal cells, becoming erumpent, up to 60 µm diam, giving rise to conidiophores. *Conidiophores* fasciculate, containing numerous conidiophores in dense clusters, subcylindrical, straight, rarely once-geniculate, brown, finely verruculose, 1–3-septate, 30–70 × 6–7 µm. *Conidiogenous cells* terminal, integrated, 25–55 × 5–7 µm, brown, finely verruculose, subcylindrical; loci terminal, single, rarely with lateral locus, scars flattened, darkened, thickened, 3–4 µm diam. *Conidia* solitary, hyaline, obclavate to subcylindrical, straight to slightly curved, apex subobtuse, widest at or below basal septum, (38–)42–55 (–70) × (4–)5(–6) µm, 3–5-septate; hila thickened, darkened and refractive, 3–4 µm diam.

Culture characteristics — (in the dark, 25 °C after 2 wk): Colonies spreading, with moderate aerial mycelium and even, lobate margin. On potato-dextrose agar surface dirty white, surrounded by broad red-purple zone of diffuse pigment in agar, dark red in reverse. On oatmeal agar centre dirty white, outer region olivaceous-grey. On malt extract agar surface dirty white with patches of olivaceous-grey, reverse iron-grey, reaching 30 mm diam.

Typus. SOUTH AFRICA, Free State Province, Bloemfontein, Free State National Botanical Garden, on leaves of *Chrysanthemoides monilifera* (Asteraceae), 7 May 2012, P.W. Crous & W.J. Swart, holotype CBS H-21084, cultures ex-type CPC 20605, CPC 20529 = CBS 133582, ITS sequences GenBank KC005779–KC005780, ACT sequences GenBank KC005764–KC005765, TEF sequences GenBank KC005813–KC005814, CAL sequences GenBank KC005767–KC005768, LSU sequences GenBank KC005800–KC005801, MycoBank MB801778.

Notes — Based on a megablast search of NCBI's GenBank nucleotide database, the closest hits using the LSU sequence are *Cercospora* cf. *apii* (GenBank JN941176; Identities = 900/902 (99 %), Gaps = 1/902 (0 %)), *Cercospora acaciae-mangii* (GenBank JN941175; Identities = 900/902 (99 %), Gaps = 1/902 (0 %)) and *Cercospora* sp. (GenBank JN941174; Identities = 900/902 (99 %), Gaps = 1/902 (0 %)). Closest hits using the ITS sequence had highest similarity to *Cercospora zebrina* (GenBank JX390615; Identities = 529/530 (99 %), Gaps = 0/530 (0 %)), *Cercospora piaropi* (GenBank HQ902254; Identities = 529/530 (99 %), Gaps = 0/530 (0 %)) and *Cercospora capsici* (GenBank GU214654; Identities = 529/530 (99 %), Gaps = 0/530 (0 %)). Closest hits using the ACT sequence had highest similarity to *Cercospora althaeina* (GenBank JX143036; Identities = 192/194 (99 %), Gaps = 0/194 (0 %)), *Cercospora zebrina* (GenBank JX143260; Identities = 211/214 (99 %), Gaps = 0/214 (0 %)) and *Cercospora armoraciae* (GenBank JX143058; Identities = 190/194 (98 %), Gaps = 0/194 (0 %)). Closest hits using the TEF sequence had highest similarity to *Cercospora delaireae* (GenBank JX143346; Identities = 288/292 (99 %), Gaps = 0/292 (0 %)), *Cercospora ricinella* (GenBank JX143406; Identities = 287/291 (99 %), Gaps = 0/291 (0 %)) and *Cercospora* cf. *zinniae* CPC 15075 (GenBank JX143519; Identities = 287/292 (98 %), Gaps = 0/292 (0 %)). Closest hits using the CAL sequence had highest similarity to *Cercospora* cf. *chenopodii* (GenBank JX142839; Identities = 388/398 (97 %), Gaps = 0/398 (0 %)), *Cercospora ricinella* (GenBank JX142913; Identities = 287/297 (97 %), Gaps = 0/297 (0 %)) and *Cercospora* cf. *coreopsisidis* (GenBank JX142851; Identities = 285/296 (96 %), Gaps = 0/296 (0 %)) (see Groenewald et al. (In press) for morphological details pertaining to the species cited above).

Colour illustrations. *Chrysanthemoides monilifera* in the Free State National Botanical Garden; leaf spots; lesion; conidiophores and conidia. Scale bars = 10 µm.

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