

*Cercospora eremochloae*



Fungal Planet 69 – 31 May 2011

***Cercospora eremochloae* R.G. Shivas & A.J. Young, sp. nov.**

Conidiophora 2–10, fasciculis laxis in stromatum pagina, erecta, geniculata-sinuata, paulum attenuata, ramosa vel inramosa, rubella-brunnea pallidiorescentia ad apicem, 100–275 × 4–6 µm, usque ad 20 septata, paries levis. Cellulae conidiogenae terminales, monoblasticae vel polyblasticae, sympodiales, geniculatae, brunneolae; cicatrices conidiales conspicuae, crassatae et refractivae, terminales et laterales. Conidia solitaria vel catenis brevibus ramosis et inramosis, cylindracea, ellipsoidea, obovoidea, obclavata, fusiformia, recta, hyalina ad subhyalina, 10–35 × 3.0–7.5 µm, (0–)1–4(–6)–septata, levia, extrema rotundata, basis obconice truncata, hila crassata et refractiva.

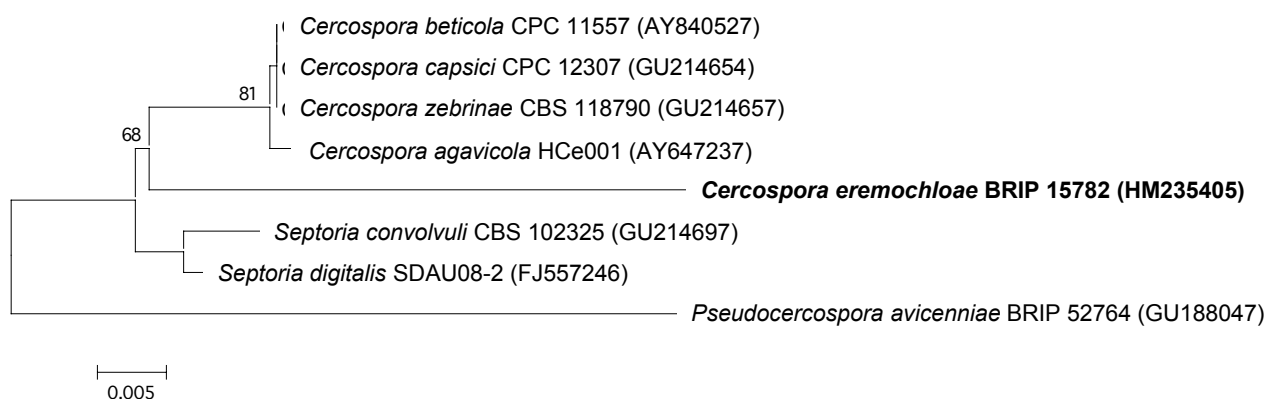
*Etymology.* Derived from the name host plant genus, *Eremochloa* (Poaceae).

*Leaf spots* amphigenous, narrow elliptical, often elongated, up to 7 cm long, 0.5–1.5 mm wide, smaller leaf spots bordered by veins, centres orange to pale brown with darker reddish to purplish brown diffuse margins. *Mycelium* internal. *Stromata* reddish brown, erumpent, usually filling stomatal opening; up to 40 µm diam. *Conidiophores* 2–10, in loose fascicles on the surface of the stromata, erect, geniculate-sinuuous, slightly attenuated, branched or unbranched, reddish brown becoming paler towards the apex, 100–275 × 4–6 µm, up to 20-septate, wall smooth. *Conidiogenous cells* terminal, monoblastic or polyblastic, sympodial, geniculate, pale brown; conidial scars conspicuous, thickened and refractive, terminal and lateral. *Conidia* solitary or in short branched and unbranched chains, cylindrical, ellipsoid, obovoid, obclavate to fusiform, straight, hyaline to subhyaline, 10–35 × 3.0–7.5 µm, (0–)1–4(–6)–septate, smooth, ends rounded, base obconically truncate, hila thickened and refractive.

*Typus.* AUSTRALIA, Queensland, Mareeba, *Eremochloa bimaculata*, 30 Apr. 1987, J.L. Alcorn, BRIP 15782, holotype; IMI 321201, isotype; ITS sequence GenBank HM235405, and LSU sequence GenBank HM235406, MycoBank MB560159.

*Notes* — Species of *Cercospora* s.str. have conspicuously thickened and darkened conidial scars and hyaline or subhyaline, solitary (rarely catenate) conidia formed on pigmented (rarely hyaline to subhyaline) conidiophores (Braun 1995, Crous & Braun 2003, Crous et al. 2009b, c). *Cercospora eremochloae* differs from *Cercospora* s.str. in having non-acicular, hyaline to faintly pigmented conidia that are either solitary or in short, branched to unbranched chains. DNA sequence data indicated, however, that *C. eremochloae* clusters with the *Cercospora* complex, which forms a well-defined clade in the *Mycosphaerellaceae* (Crous et al. 2009b, c). When this specimen was examined by B.C. Sutton in 1988, he reported that he would place it in *Phaeoramularia* as the conidia were catenate and that this specimen was unlike any of the gramicolous members of the '*Cercospora*' groups. However *Phaeoramularia* was reduced to synonymy with *Passalora* (Crous & Braun 2003), which currently represents an unresolved and inordinately wide complex of taxa (Crous et al. 2009b, c).

BLASTn results of the ITS sequence of *C. eremochloae* indicated similarity to sequences of *Mycosphaerella berberidis* (EU167603; Identities = 481/499 (96 %), Gaps = 6/499 (1 %)), and *Cercospora agavicola* (AY647237; Identities = 481/501 (96 %), Gaps = 10/501 (1 %)). The LSU sequence (HM235406) shared 877/885 sequence identities with *C. zebrianae* (GU214657), indicating it is phylogenetically distinct from *Cercospora* s.str. Genomic DNA of *C. eremochloae* (holotype) is stored in the Australian Biosecurity Bank (<http://www.padil.gov.au/>).



*Colour illustrations.* Grasses with unknown beetle where *C. eremochloae* was collected; leaf spots; conidiophores and conidia. Scale bar top left = 5 mm, others = 10 µm.

Maximum Likelihood Tree obtained using the General Time Reversible Model from an ITS sequence alignment generated with MUSCLE in MEGA4 (Tamura et al. 2007). The bootstrap support values from 1 000 replicates are shown at the nodes. Bar represents number of substitutions per site. The species described here is printed in **bold** face. The tree was rooted to *Pseudocercospora avicenniae* (GenBank GU188047).