

Neophaeomoniella eucalypti
& *Paraphaeomoniella capensis*



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***Neophaeomoniella* Rooney-Latham & Crous, gen. nov.**

Etymology. Name reflects its morphological similarity to the coelomycetous synanamorph of *Phaeomoniella*.

Classification — *Incertae sedis*, *Phaeomoniellales*, *Eurotiomycetes*.

Conidiomata pycnidial, globose, aggregated in a cluster, olivaceous brown to green-brown, with central ostiole; wall of 2–3 layers of green-brown *textura angularis*. *Conidiophores* reduced

to conidiogenous cells. *Conidiogenous cells* lining the inner cavity, hyaline to green-brown, smooth, ampulliform, with periclinal thickening. *Conidia* solitary, hyaline, smooth, ellipsoid, straight, apex obtuse, base with minute scar; yeast synanamorph forming on agar.

Type species. *Neophaeomoniella eucalypti*.
MycoBank MB812464.

***Neophaeomoniella eucalypti* Rooney-Latham & Crous, sp. nov.**

Etymology. Name reflects the host *Eucalyptus*, from which this species was isolated.

Conidiomata pycnidial, globose, aggregated in a cluster, olivaceous brown to green-brown, 60–150 µm diam, with central ostiole, 15 µm diam; wall of 2–3 layers of green-brown *textura angularis*. *Conidiophores* reduced to conidiogenous cells. *Conidiogenous cells* lining the inner cavity, hyaline to green-brown, smooth, ampulliform, 5–7 × 2.5–3 µm; apex 0.5–1 µm diam, with periclinal thickening. *Conidia* (on SNA) solitary, hyaline, smooth, ellipsoid, straight, apex obtuse, base with minute scar, 0.5 µm diam, 3–4 × (1.5–)2 µm; yeast synasexual morph forming on agar, with conidia forming directly from hyphal cells.

Culture characteristics — See MycoBank.

Typus. USA, California, San Luis Obispo County, Nipomo, on stems of *Eucalyptus globulus* (*Myrtaceae*), 26 Aug. 2014, coll. K. Corella, isol. S. Rooney-Latham (holotype CBS H-22249, culture ex-type CPC 25161 = CBS 139919; ITS sequence GenBank KR476749, LSU sequence GenBank KR476782, MycoBank MB812465).

Notes — The genus *Phaeomoniella* (*Phaeomoniellales*, see Chen et al. 2015), based on *P. chlamydospora*, was established to accommodate the causal organism of Petri disease of grapevine (Crous & Gams 2000). This fungus is commonly isolated from *Vitis* wood with brown wood streaking symptoms (Halleen et al. 2007). It is a hyphomycetous ascomycete, with a coelomycetous syn-

asexual morph. Since its description, several other taxa have been added to the genus because they had a similar morphology, and were also phylogenetically related. Damm et al. (2010) described several species of *Phaeomoniella* associated with brown wood streaking of *Prunus*, but that had a hyphomycetous synanamorph differing in morphology to that of *P. chlamydospora*, while Lee et al. (2006) described species that only had a yeast morph, and other species again only had the coelomycetous morph (Crous et al. 2008, Crous & Groenewald 2011). Subsequently the genus has become rather cumbersome and widely circumscribed, and some taxa associated with brown wood streaking symptoms of other hosts can now be separated into distinct genera. *Neophaeomoniella* is one such genus that although related to *Phaeomoniella*, lacks the characteristic hyphomycetous morph.

***Neophaeomoniella niveniae* (Crous) Crous, comb. nov.** —
MycoBank MB812466

Basionym. *Phaeomoniella niveniae* Crous, *Persoonia* 27: 155. 2011.

***Neophaeomoniella zymoides* (Huang B. Lee, J.Y. Park, Summerb. & H.S. Jung) Crous, comb. nov.** — MycoBank MB812467

Basionym. *Phaeomoniella zymoides* Huang B. Lee, J.Y. Park, Summerb. & H.S. Jung, *Mycologia* 98: 601. 2006.

***Paraphaeomoniella* Crous, gen. nov.**

Etymology. Name reflects a morphological similarity to the coelomycetous synanamorph of *Phaeomoniella*.

Classification — *Incertae sedis*, *Phaeomoniellales*, *Eurotiomycetes*.

Mycelium consisting of septate, branched, hyaline to pale brown, thick-walled hyphae, developing hyaline, thin-walled, swollen, globose structures. *Conidiomata* pycnidial to acervular, opening by

irregular rupture, erumpent, brown; wall of 3–6 layers of brown *textura angularis*. *Conidiophores* hyaline, smooth, highly variable in morphology, occurring in branched structures, septate, or solitary, ampulliform, reduced to phialides. *Conidiogenous cells* with apical opening revealing minute periclinal thickening. *Conidia* hyaline, smooth, narrowly ellipsoid, straight.

Type species. *Paraphaeomoniella capensis*.
MycoBank MB812468.

***Paraphaeomoniella capensis* Crous & A.R. Wood, sp. nov.**

= *Phaeomoniella capensis* Crous & A.R. Wood, *Persoonia* 21: 137. 2008. nom. inval., Art. 40.6.

Description & Illustration — See Crous et al. (2008).

Specimen examined. SOUTH AFRICA, Western Cape Province, Kirstenbosch Botanical Garden, on living leaves of *Encephalartos altensteinii* (*Zamiaceae*), 22 May 2008, A.R. Wood (holotype CBS H-20159, culture ex-type CPC 15416

Colour illustrations. *Eucalyptus* trees growing in California; *Neophaeomoniella eucalypti*: conidiomata on OA; conidiogenous cells and conidia. Scale bars = 10 µm.

= CBS 123535; ITS sequence J372391, LSU sequence GenBank FJ372408, MycoBank MB812469; CPC 15417–15418.

Notes — '*Phaeomoniella*' *capensis* was invalidly described (Crous et al. 2008), because the holotype specimen was not indicated as such (Art. 40.6, Melbourne ICN), and it is thus validated here and placed in a new genus. *Paraphaeomoniella* lacks the hyphomycetous synasexual morph found in *Phaeomoniella* s.str., and is distinguished from *Neophaeomoniella* and *Pseudo-phaeomoniella* by having pycnidial to acervular conidiomata, and conidiophores that are frequently irregularly branched.

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