

***Microdiplodia hawaiiensis* Crous, sp. nov.**

Mycobank: MB501008.

Etymology: Named after the island from where it was collected, Hawaii.

Latin diagnosis: Conidia ellipsoidea vel subcylindrica, aureo-brunnea, verruculosa, 1(–2)-septata, (10–)12–13 × (4–)5(–5.5) µm.

Description: *Conidiomata* separate, pycnidial, brown, globose, up to 500 µm diam; wall consisting of 2–3 layers of brown cells of *textura angularis*. *Conidiogenous cells* lining the inner conidiomatal cavity, ampulliform to subcylindrical, 5–15 × 6–7 µm, phialidic with periclinal thickening, but also proliferating several times percurrently near the apex, monophialidic, but occasionally polyphialidic in culture. *Conidia* ellipsoidal to subcylindrical, with obtuse apex and obtusely rounded to subtruncate base, initially hyaline, smooth, becoming golden-brown and verruculose, 1(–2)-septate, thick-walled, (10–)12–13 × (4–)5(–5.5) µm *in vitro* and *in vivo*.

Cultural characteristics: Colonies on 2 % potato-dextrose agar¹ (PDA; Difco) spreading, reaching 45 mm diam after 2 weeks at 25 °C; aerial mycelium sparse, colonies grey-olivaceous to olivaceous-black, margins regular, smooth, submerged, olivaceous; reverse olivaceous-grey, becoming grey-olivaceous towards the margins.

Typus: Hawaii, Saddle road, on stems of *Sophora chrysophylla*, Aug. 2005, collected by W. Gams & Y. Degawa, CBS-H 19778, **holotypus**; cultures ex-type CPC 12265 = CBS 120025, CPC 12266, 12268–12269.

Notes: The genus *Microdiplodia* Allesch. (based on *M. conigena* Allesch.), contains close to 350 names, but has so far not been monographed, and is thus insufficiently known. Species have traditionally been placed in *Microdiplodia* based on their small, brown, 1-septate conidia, and their occurrence on stems and branches. Based on these features, the present collection is also tentatively allocated to *Microdiplodia*. In a recent DNA phylogenetic study, Crous *et al.*² showed that *M. hawaiiensis* clusters outside the *Botryosphaeriaceae* (which includes *Diplodia sensu stricto*), and sorts with species of *Camarosporium* Schulzer and *Karstenula* Speg. Further type studies would be required to resolve the phylogenetic position of *Microdiplodia*.

BLASTn results of the ITS sequence of *M. hawaiiensis* had E-values of 0.0 (94 % identical) with the ITS sequences of members of the *Pleosporales*, for example a *Paraphaeosphaeria* sp. (AB096264), *Bipolaris sorokiniana* (Sacc.) Shoemaker (DQ337383), *Paraconiothyrium cyclothyrioides* Verkley (AY929375), *Coniothyrium wernsdorffiae* Laubert (AY904058) and *Coniothyrium fuckelii* Sacc. (AY904055). The partial 28S rRNA gene sequences (GenBank DQ885896–DQ885897) also place *M. hawaiiensis* with members of the *Pleosporales*.

Colour illustrations: *Sophora chrysophylla* trees in Hawaii showing typical witch's brooms. *Camarosporium sophorae*, *Microdiplodia hawaiiensis* and a *Botryosphaeria* sp. were isolated from these branches (Y. Degawa); colony sporulating on PDA; conidia and conidiogenous cells (P.W. Crous). Scale bar = 10 µm.

References: ¹Gams W, Hoekstra ES, Aptroot A (eds) (1998). *CBS course of mycology* 4th ed. Centraalbureau voor Schimmelcultures, Baarn, Delft, Netherlands. ²Crous, PW, Slippers B, Wingfield MJ, Rheeder J, Marasas WFO, Phillips AJL, Alves A, Burgess T, Barber P, Groenewald JZ (2006). Phylogenetic lineages in the *Botryosphaeriaceae*. *Studies in Mycology* **55**: 235–253.

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