

Seiridium persooniae



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***Seiridium persooniae* Crous, sp. nov.**

Etymology. Name refers to *Persoonia*, the host genus from which this fungus was collected.

Classification — *Sporocadaceae*, *Xylariales*, *Sordariomycetes*.

Conidiomata stromatic, separate, globose, erumpent, black, up to 300 µm diam, unilocular; walls of 4–8 layers of brown *textura angularis*. *Conidiophores* lining the inner cavity, subcylindrical, branched below, hyaline, smooth, 2–3-septate, up to 50 µm long. *Conidiogenous cells* integrated, terminal and lateral, subcylindrical, 10–20 × 2.5–3 µm, proliferating percurrently at apex. *Conidia* fusoid, wall smooth, not constricted at septa, 5-septate with central pore, guttulate, (20–)25–35(–38) × (9–)10(–12) µm, wall 1 µm thick; basal cell obconic, subhyaline with single unbranched central appendage, 1 µm long (rarely present); apical cell bluntly rounded, subhyaline with central unbranched appendage, 1–2 µm long.

Culture characteristics — Colonies flat, spreading, with moderate aerial mycelium and feathery margins, reaching 45 mm diam after 2 wk at 25 °C. On MEA surface dirty white with patches of olivaceous grey, reverse iron-grey in centre, luteous in outer region. On PDA surface dirty white, reverse olivaceous grey. On OA surface dirty white.

Typus. AUSTRALIA, New South Wales, Nunnock Swamp, on leaves of *Persoonia* sp. (*Proteaceae*), 28 Nov. 2016, P.W. Crous (holotype CBS H-23268, culture ex-type CPC 32301 = CBS 143445, ITS, LSU and *tub2* sequences GenBank MG386033, MG386086 and MG386163, MycoBank MB823374).

Notes — The genus *Seiridium* includes several plant pathogenic species causing cankers on *Cupressaceae*. Of the species presently known, none have been described from *Persoonia*. Phylogenetically, *S. persooniae* is closely related to *S. unicorne* (on *Cupressus*, *Juniperus*, *Thuja*; conidia fusiform, 5–6-septate, (23–)24–30 × (7–)7.5–9.5(–10) µm, apical appendage 3–10 µm, basal appendage 3–6 µm; Nag Raj 1993), but distinct in that it has larger conidia and shorter appendages.

Based on a megablast search using the ITS sequence, the closest matches in NCBI's GenBank nucleotide database were *Seiridium cardinale* (GenBank AF405305; Identities 536/556 (96 %), 17 gaps (3 %)), *Seiridium cupressi* (GenBank FJ430600; Identities 543/564 (96 %), 17 gaps (3 %)) and *Seiridium phylicae* (GenBank KC005788; Identities 559/581 (96 %), 17 gaps (2 %)). The highest similarities using the LSU sequence were *Seiridium unicorne* (GenBank DQ414532; Identities 833/834 (99 %), no gaps), *Seiridium pseudocardinale* (GenBank KU848209; Identities 832/833 (99 %), no gaps) and *Seiridium phylicae* (GenBank NG_042759; Identities 842/844 (99 %), 1 gap (0 %)). The highest similarities using the *tub2* sequence were *Seiridium phylicae* (GenBank KC005819; Identities 437/451 (97 %), 2 gaps (0 %)), *Seiridium cardinale* (GenBank DQ926973; Identities 356/368 (97 %), 1 gap (0 %)) and *Seiridium cupressi* (GenBank DQ926979; Identities 354/367 (96 %), 1 gap (0 %)).

Colour illustrations. *Lomatia myricoides* growing intermixed with *Persoonia* sp. in Nunnock Swamp; conidiomata sporulating on OA, conidiophores and conidia. Scale bars = 10 µm.

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