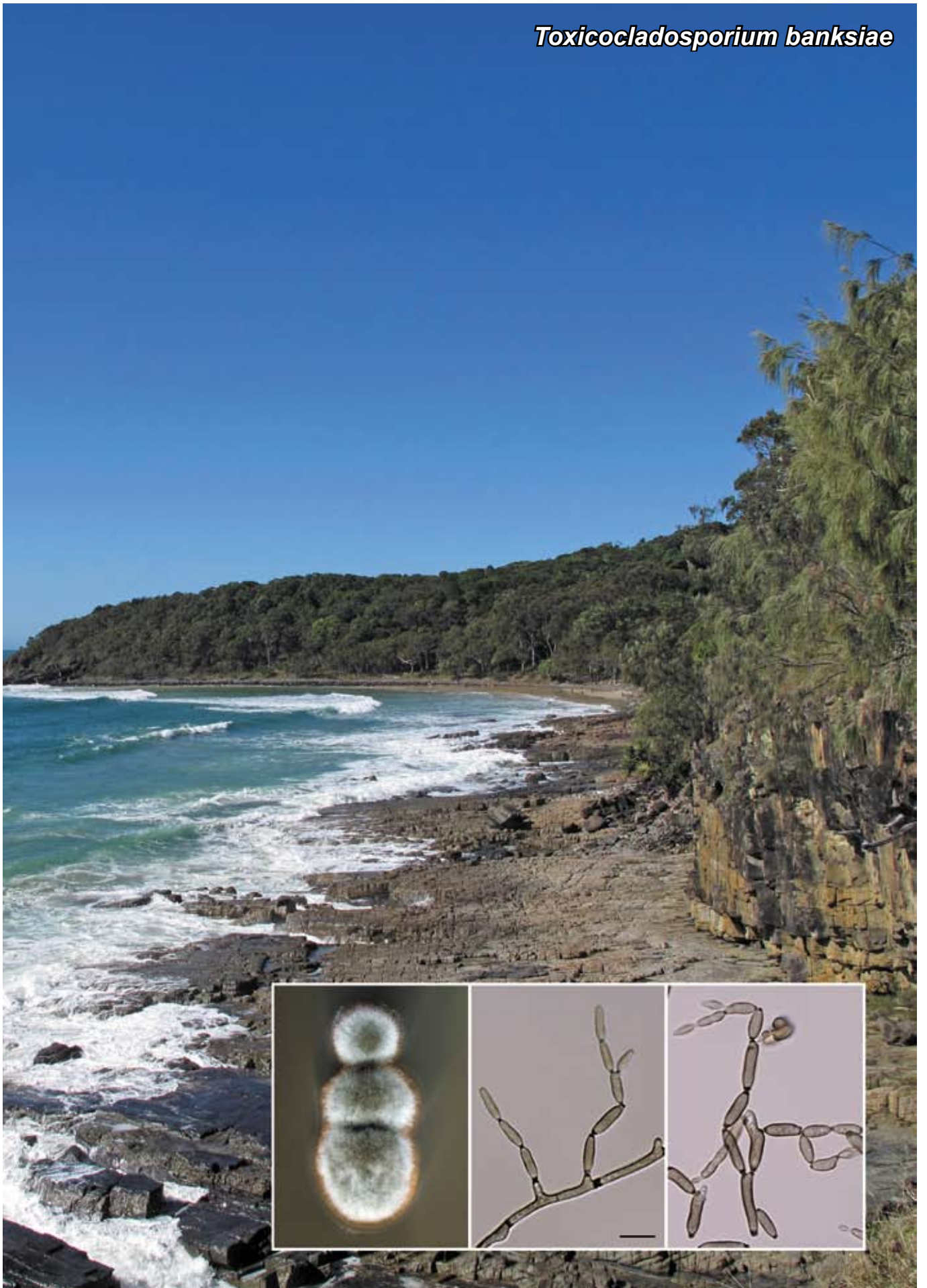


Toxicocladosporium banksiae



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Toxicocladosporium banksiae Crous, R.G. Shivas & McTaggart, *sp. nov.*

Toxicocladosporio veloxo simile, sed conidiis terminalibus majoribus, (7–)8–10(–11) × (2–)2.5–3 µm, distinguuntur.

Etymology. Named after the host from which it was collected, *Banksia*.

Mycelium on potato-dextrose agar consisting of smooth, septate, branched hyphae, dark brown, 2.5–4 µm diam; walls and septa becoming dark brown and thickened with age. *Conidiophores* solitary, dimorphic, macronematous, or micronematous, reduced to conidiogenous cells. *Macronematous conidiophores* subcylindrical, straight to geniculate-sinuous, unbranched or branched above, 3–7-septate, dark brown, smooth, walls and septa thick, dark brown, 50–130 × 3–4 µm. *Micronematous conidiophores* reduced to conidiogenous cells (rarely with one or two supporting cells), erect, subcylindrical to doliiform, tapering at apex, 10–40 × 2.5–4 µm. *Conidiogenous cells* integrated, terminal or lateral, subcylindrical, with slight taper towards apex, 6–20 × 2.5–3 µm; proliferating sympodially with 1–3 apical, protruding loci, 1–1.5 µm wide, thickened, darkened and refractive. *Conidia* catenate in branched or unbranched chains, medium to dark brown, thick-walled, with dark, thick septa, finely verruculose; ramoconidia (14–)17–25 × (2.5–)3–4 µm, 0–1-septate, constricted at septa, broadly ellipsoid to subcylindrical; intercalary conidia ellipsoid to ovoid, 10–12(–20) × (2.5–)3–3.5 µm, 0–1-septate, apical conidia pale to medium brown, aseptate, (7–)8–10(–11) × (2–)2.5–3 µm; hila protruding, 1–1.5 µm wide, thickened, darkened and refractive.

Culture characteristics — (in the dark, 25 °C, after 2 wk): Colonies erumpent, spreading, folded, with sparse aerial mycelium and even, lobate margins, reaching up to 7 mm diam. On malt extract agar surface pale olivaceous-grey, reverse olivaceous-grey; on oatmeal agar olivaceous-grey; on potato-dextrose agar olivaceous-grey (surface and reverse).

Colour illustrations. Noosa National Park; colony on malt extract agar; conidiophores with conidiogenous cells giving rise to conidia. Scale bar = 10 µm.

Typus. AUSTRALIA, Queensland, Noosa National Park, 26°34'14.0"S 153°4'21.6"E, on leaves of *Banksia emulata*, 13 July 2009, P.W. Crous, R.G. Shivas & A.R. McTaggart, CBS-H 20496 holotype, cultures ex-type CPC 17281, 17280 = CBS 128215, ITS sequence of CPC 17280 GenBank HQ599598 and LSU sequence of CPC 17280 GenBank HQ599599, MycoBank MB517544.

Notes — A search of GenBank using the LSU sequence retrieved as closest sisters *Toxicocladosporium chlamydosporum* (GenBank FJ790302; Identities = 854/864 (99 %), Gaps = 4/864 (0 %)), *Toxicocladosporium irritans* (GenBank EU040243; Identities = 853/864 (99 %), Gaps = 4/864 (0 %)) and *Toxicocladosporium veloxum* (GenBank FJ790306; Identities = 853/864 (99 %), Gaps = 4/864 (0 %)). Two of these three species were also obtained when a megablast was performed with the ITS sequence, albeit with a slightly lower sequence identity (*T. veloxum* GenBank FJ790288, Identities = 596/615 (97 %), Gaps = 11/615 (1 %) and *T. chlamydosporum* GenBank FJ790284, Identities = 596/617 (97 %), Gaps = 13/617 (2 %)). Based on the DNA sequence data of the ITS gene, *T. banksiae* is closely related to *T. veloxum* and *T. chlamydosporum*¹. *Toxicocladosporium veloxum* has smaller intercalary (9–12 × 2.5–3 µm) and terminal (8–10 × 2–2.5 µm) conidia. In *T. chlamydosporum* the ramoconidia (15–18 × 2.5–4 µm), intercalary (8–11 × 3–3.5 µm) and terminal conidia (6–9 × 2.5–3 µm) are smaller, and *T. banksiae* lacks chlamydo-spores. There is also a significant difference in the ITS sequence between *T. banksiae* and *T. protearum* (described as Fungal Planet 57 elsewhere in this volume), Identities = 636/655 (98 %), Gaps = 10/655 (1 %).

Reference. ¹Crous PW, Wingfield MJ, Groenewald JZ. 2009. Niche sharing reflects a poorly understood biodiversity phenomenon. *Persoonia* 22: 83–94.

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