

*Myrmecridium iridis*



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## ***Myrmecridiales* Crous, ord. nov.**

*Mycelium* compact, with fertile bundles of hyphae. *Conidiophores* arising vertically and clearly distinct from creeping hyphae, unbranched, straight or flexuose, brown, thick-walled. *Conidiogenous cells* terminally integrated, polyblastic, cylindrical, pale brown, with a rachis of scattered pimple-shaped, apically pointed, conidium-bearing denticles. *Conidia* solitary,

subhyaline to pale brown, smooth or finely verrucose, with a wing-like gelatinous sheath, obovoid to fusoid, aseptate or septate, tapering towards a narrowly truncate base; conidial secession schizolytic. *Sexual morphs* unknown.

*Type family.* *Myrmecridiaceae* Crous.  
MycoBank MB812460.

## ***Myrmecridiaceae* Crous, fam. nov.**

*Colonies* moderately fast-growing, flat, with mainly submerged mycelium, becoming powdery to velvety. *Mycelium* rather compact, mainly submerged, in the centre velvety with fertile bundles of hyphae. *Conidiophores* arising vertically and clearly distinct from creeping hyphae, unbranched, straight or flexuose, brown, thick-walled. *Conidiogenous cells* terminally integrated, polyblastic, cylindrical, straight or flexuose, pale brown, sometimes secondarily septate, fertile part subhyaline, as wide as

the basal part, with scattered pimple-shaped, apically pointed, conidium-bearing denticles. *Conidia* solitary, subhyaline to pale brown, smooth or finely verrucose, rather thin-walled, with a wing-like gelatinous sheath, obovoid to fusoid, aseptate or septate, tapering towards a narrowly truncate base with a slightly prominent, unpigmented hilum; conidial secession schizolytic.

*Type genus.* *Myrmecridium* Arzanlou, W. Gams & Crous.  
MycoBank MB812461.

## ***Myrmecridium iridis* Crous, sp. nov.**

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

*Classification* — *Myrmecridiaceae*, *Myrmecridiales*, *Sordariomycetes*.

On SNA mycelium consisting of hyaline, thin-walled, smooth, 1.5–2 µm diam hyphae. *Conidiophores* erect, unbranched, straight, medium brown, thick-walled, 30–60 µm tall, 3–5 µm wide, 1–2-septate. *Conidiogenous cells* terminal, integrated, cylindrical, 20–40 × 3–5 µm, medium brown, smooth, fertile region forming a rachis with pimple-like denticles at the swollen apex, 0.5–1 µm long and 0.5 µm wide, unpigmented, slightly thickened scars. *Conidia* solitary, pale brown, thin-walled, finely verruculose, with a wing-like gelatinous sheath up to 0.5 µm thick, 0–1(–3)-septate, fusoid, (14–)16–18(–20) × (2.5–)3 µm; apex obtuse, tapering from middle to a truncate hilum, 0.5 µm diam, somewhat darkened.

*Culture characteristics* — Colonies erumpent, spreading, with even, lobed margins and sparse to moderate aerial mycelium, reaching 40 mm diam after 1 mo at 25 °C. On PDA surface sienna and reverse apricot to salmon. On OA surface ochreous. On MEA surface dirty white, reverse ochreous.

*Typus.* NETHERLANDS, Bunnik, on leaves of *Iris* sp. (*Iridaceae*), 10 Sept. 2014, P.W. Crous (holotype CBS H-22247, culture ex-type CPC 25084 = CBS 139917; ITS sequence GenBank KR476744, LSU sequence GenBank KR476777, MycoBank MB812462); CPC 25085.

*Colour illustrations.* *Iris* sp. growing in Bunnik; symptomatic leaf; conidiophores and conidia (note sheath). Scale bars = 10 µm.

*Notes* — Arzanlou et al. (2007) established the genus *Myrmecridium* (*Incertae sedis*, *Sordariomycetes*) to accommodate ramichloridium-like taxa with hyaline mycelium, and pale to unpigmented, pimple-like denticles. Subsequent to the introduction of the genus, several additional species have been described, revealing *Myrmecridium* as a distinct and undefined clade in the *Sordariomycetes*, for which the *Myrmecridiaceae* and *Myrmecridiales* are introduced here.

Phylogenetically, *Myrmecridium iridis* (conidia 0–1(–3)-septate, 14–20 × 2.5–3 µm) is closely related to *M. banksiae* (conidia aseptate, 9–14 × 2.5–3.5 µm), which is easily distinguishable morphologically based on its smaller, aseptate conidia. *Myrmecridium iridis* is the first species of the genus known to have septate conidia (Crous et al. 2011, 2012c, Jie et al. 2013).