

Outlineoffungi.org – Note 679 *Stomatothyrium*

Web-links: [Index Fungorum](#), [Facesoffungi](#), [MycoBank](#)

Stomatothyrium Le Renard, Upchurch, Stockey & Berbee

Stomatothyrium is a monotypic fossil genus (type: *S. placocentrum* Le Renard, Upchurch, Stockey & Berbee) of epiphyllous fungi that forms shield-like coverings (scutella) of sporulating tissue on leaf surfaces ([Le Renard et al. 2021](#)). This fungal sporocarp type consists of radiate scutella growing from the stomata of leaves of a conifer dispersed on plant cuticles from the Early Cretaceous sediments of Virginia, USA. Isolated fragments of conifer cuticles, colonized by the fungus from macerated clays of the Potomac Group, Lower Zone 1 (Aptian, 125–113 Ma), were studied, using light microscopy ([Le Renard et al. 2021](#)). Comparative anatomical study of the scutella from the fossil fungus and that from extant taxa was made. The extant taxa producing either rhizothyria (asexual sporocarps that release spores from below the outer edge of the scutellum) or thyriothecia (sporocarps that release spores through dorsal cracks or an ostiole) were considered ([Le Renard et al. 2021](#)). The study of more than 63 specimens at different developmental stages on cuticle fragments revealed that *Stomatothyrium placocentrum* has a radial arrangement of scutellum hyphae, characteristic of extant and fossil thyriothecial species in *Dothideomycetes* (Ascomycota) ([Le Renard et al. 2021](#)). The scutella develop cracks on the dorsal surface that may show the dehiscence mechanism ([Le Renard et al. 2021](#)). Unusually for dehiscence in *Dothideomycetes*, the cracks follow the scutellum circumference rather than its radius ([Le Renard et al. 2021](#)). Each scutellum arises from a host plant stoma, appearing first as a hyphal columella that broadens into a flat scutellum disk on the leaf surface ([Le Renard et al. 2021](#)).

Based morphological characters of *Stomatothyrium placocentrum* [Le Renard et al. \(2021\)](#) suggest that it represents a now extinct group of leaf-dwelling, thyriothecia forming *Dothideomycetes*. However, the extant relationship of this genus can further be traced to the order *Microthyriales*, family: *Microthyriaceae*.

Entry by

Ramesh K. Saxena, Birbal Sahni Institute of Palaeosciences, Lucknow-226007, Uttar Pradesh, India.

Reference

Le Renard L, Stockey RA, Upchurch GR, Berbee ML. 2021 – Cretaceous fungal scutella from the Lower Potomac Group Zone 1: *Stomatothyrium placocentrum* gen. et sp. nov., a Dothideomycete colonizer of conifer stomata. *International Journal of Plant Sciences* 182(8), 712–729. <https://doi.org/10.1007/s11046-021-00555-z>

(Edited by **Kevin D. Hyde and Rekhani Hansika Perera**)

Published online 8 December 2022

