

SCHIZOTREMA

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Schizotrema Mangold & Lumbsch, in A.Mangold, J.A.Elix & H.T.Lumbsch, *Fl. Australia* 57: 657 (2009); from the Greek *schizo* (to split) and *trema* (a hole), in reference to the layered ascomal margin.

Type: *S. zebrinum* Mangold

Thallus immersed to superficial, usually pale, shades of grey, with greenish, olive, or yellowish tones, with a protocortex or a true cortex. Photobiont trentepohlioid. Prothallus thin to indistinct, brown. Ascوماتа ±rounded, perithecioid or apothecioid. Thalline rim thick, becoming distinctly layered with successive ascomatal generations, coarsely split to lacerate, rarely somewhat eroded, brownish to dark brown or blackish, ±markedly contrasted by off-white layers; outer thalline rim concolorous with the thallus, exfoliating in distinctly layered thalline rims, predominantly recurved in unlayered thalline rims. Proper exciple fused to slightly free, multi-layered, dark brown to carbonised, amyloid or non-amyloid at the base. Hymenium conglutinated, not inspersed, non-amyloid; paraphyses straight to slightly bent, parallel, unbranched; tips not thickened; lateral paraphyses usually clearly separated from the proper exciple; true columella absent. Epithymenium hyaline, usually lacking granules. Asci 1–8-spored, clavate, non-amyloid. Ascospores 1–2-seriate, transversely septate to muriform, hyaline to yellowish or brownish at late maturity, non-amyloid to faintly amyloid; ascospore wall thin to moderately thick, non-halonate or thinly halonate. Conidiomata unknown.

Chemistry: β-orcinol depsidones, or secondary metabolites lacking.

Schizotrema is characterised by erumpent, regenerating, perithecioid or apothecioid ascوماتа with a ±distinctly layered margin, an apically free proper exciple that is dark brown to carbonised at the margin, a usually concolorous subhymenium, a strongly conglutinated hymenium, distinct lateral paraphyses and ±straight, parallel paraphyses with unthickened tips. The ascospores are usually hyaline, non-amyloid or amyloid, and thin- to moderately thick-walled. Similar genera include *Melanotopelia*, *Thelotrema* and *Topeliopsis*; the latter two are readily distinguished by a their pale, non-carbonised proper exciple, while *Melanotopelia* has sessile ascوماتа that are never distinctly fissured or layered. Molecular data support the genus as a distinct lineage unrelated to *Thelotrema* or *Topeliopsis* (Mangold *et al.*, 2008).

The new genus grows on bark and wood along the east coast of Australia, mainly in cool-temperate and warm-temperate rainforest, less commonly in subtropical and tropical habitats. It is found at higher altitudes in Qld and at low to moderate elevations in the south-east. *Schizotrema* is also known from Guadeloupe in the Caribbean, southern South America, Lord Howe Island and New Zealand. Four species are currently recognised, and all are known from Australia; two are endemic.

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| 1 | Ascospores transversely septate at maturity | 4. S. zebrinum |
| 1: | Ascospores submuriform to muriform at maturity | 2 |
| 2 | Ascospores submuriform, 25–35 µm long, with 10–14 × 1–2 (–3) locules (1:.) | 3. S. subzebrinum |
| 2: | Ascospores muriform, > 35 µm long; locules more numerous | 3 |
| 3 | Ascospores (20–) 30–60 (–70) µm long; thallus containing the stictic acid chemosyndrome or ‘cinchonarium unknown’ (2:) | 1. S. guadeloupense |
| 3: | Ascospores (40–) 60–120 (–130) µm long; thallus containing salazinic acid, or secondary compounds absent | 2. S. schizolum |