

TOPELIOPSIS

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Topeliopsis Kantvilas & Vězda, *Lichenologist* 32: 347 (2000); from the Greek suffix *-opsis*, indicating a superficial resemblance to the genus *Topelia* P.M.Jørg. & Vězda (Stictidaceae).

Type: *T. muscicola* Kantvilas & Vězda [= *T. muscigena* (Stizenb.) Kalb]

Thallus immersed to superficial, greyish to greenish or olive, with yellow, brown or white tones. Thallus with a protocortex that often becomes conglutinated in part, then forming a true cortex, or ecorticate. Photobiont trentepohlioid. Prothallus absent or thin, indistinct and brownish. Ascomata ±rounded, rarely slightly irregular, perithecioid to apothecioid. Proper exciple fused to apically exposed, thick, rarely thin, hyaline to pale yellowish internally, yellowish, orange, greyish or brownish marginally, ±distinctly amyloid towards the base and the subhymenium, rarely non-amyloid. Hymenium non-amyloid, not interspersed (Australian species), conglutinated; paraphyses ±straight, parallel to slightly interwoven, unbranched, the tips not thickened to slightly thickened; lateral paraphyses not clearly separated from the proper exciple; columellar structures absent. Epihymenium hyaline, sometimes brownish, usually egranulose. Asci 1–8-spored, clavate, non-amyloid. Ascospores 1–4-seriate, transversely septate to muriform, usually hyaline, rarely yellowish to brown, distinctly amyloid, rarely non-amyloid; ascospore wall thin to ±thick, smooth to sometimes ±distinctly crenate or irregular, halonate or not. Conidiomata not seen.

Chemistry: Stictic acid chemosynndrome compounds present or absent.

Topeliopsis was introduced for three species with sessile, exfoliating, perithecioid ascomata with a fused, pale to dark brown or carbonised cupular exciple, distinct lateral paraphyses and large, thin-walled, muriform, non-amyloid ascospores. Subsequently, it was limited to non-carbonised taxa with ±thick-walled ascospores; two species with a carbonised proper exciple were transferred to *Melanotopelia*. One recently described species, *T. darlingtonii*, differs in having erumpent, rather *Thelotrema*-like ascomata with a less distinctly fused apical proper exciple and non-amyloid ascospores. Muscicolous and saxicolous specimens of *T. azorica* have sessile, emergent, urceolate ascomata, whereas specimens on soft wood have ascomata that are erumpent, hemispherical and semi-emergent. Moreover, the ascospores of *T. muscigena* are often ±distinctly pigmented. Therefore, we include species with sessile, ±urceolate, fissured to eroded ascomata and hyaline to brown, amyloid ascospores, and *Thelotrema*-like ascomata and non-amyloid ascospores in the genus.

Characters common to all *Topeliopsis* species include a thick, rather pale proper exciple with indistinctly separated, lateral paraphyses and straight, parallel to slightly interwoven paraphyses that never have strongly thickened tips.

The 11 Australian species grow on epiphytic mosses, bark, dead wood and siliceous rocks, rarely on peaty soil or plant debris, at altitudes up to 1500 m. Most occur in rainforest and wet-sclerophyll forest or in subalpine or alpine woodland and moorland in eastern Australia. They are especially common in the New South Wales, Victoria and Tasmania; seven are thought to be endemic to Australia.

G.Kantvilas & A.Vězda, Studies on the lichen family Thelotremataceae in Tasmania. The genus *Chroodiscus* and its relatives, *Lichenologist* 32: 325–357 (2000); K.Kalb, The lichen genus *Topeliopsis* in Australia and remarks on Australian Thelotremataceae, *Mycotaxon* 79: 319–328 (2001); A.Frisch & K.Kalb, The lichen *Topeliopsis*, additions and corrections, *Lichenologist* 38: 37–45 (2006).

1	Ascospores transversely septate (rarely with 1 longitudinal septum).....	2
1:	Ascospores muriform.....	6
2	Ascospores brown, 12–22 µm long (1).....	6. T. kantvilasii
2:	Ascospores hyaline, > 22 µm long.....	3
3	Ascospores 35–60 µm long, with 10–16 locules; thallus containing the stictic acid chemosyndrome (2:).	3. T. darlingtonii
3:	Ascospores > 60 µm long, with more than 16 locules; thallus lacking secondary compounds.....	4
4	Thallus to 500 µm thick, distinctly corticate; ascospores 100–200 µm long (3:).	9. T. pseudoexanthismocarpa
4:	Thallus to 100 µm thick, ecorticate or indistinctly corticate; ascospores to 150 µm long.....	5
5	Ascospores with 15–24 (–25) locules (4:).	10. T. subdenticulata
5:	Ascospores with 19–32 locules.....	1. T. acutispora
6	Asci 8-spored; ascospores 30–70 µm long (1:).	4. T. decorticans
6:	Asci 1–4-spored; ascospores > 70 µm long.....	7
7	Asci 2–4-spored; ascospores 50–100 µm long (6:).	11. T. tasmanica
7:	Asci 1 (–2)-spored; ascospores > 100 µm long.....	8
8	Ascospores yellowish to pale brown at late maturity, 100–210 µm long (7:).	8. T. muscigena
8:	Ascospores persistently hyaline, to 180 µm long.....	9
9	Ascospores forming ascoconidia in terminal stages of development; thallus containing hypoconstictic and hyposalazinic acids (major) (8:).	5. T. elixii
9:	Ascospores not forming ascoconidia; thallus containing stictic acid (major) or lacking secondary compounds.....	10
10	Thallus to 50 µm thick, ±pale greyish, dull to slightly glossy; true cortex absent (9:).	2. T. azorica
10:	Thallus to 200 µm thick, pale to dark olive-green or olive-brown; surface waxy; true cortex yellowish.....	7. T. laceratula