



APTROOTIA ¹

Gintaras Kantvilas ²

Aptrootia Lücking & Sipman, in R. Lücking et al., *Lichenologist* 39: 188 (2007).

Type: *A. terricola* (Aptroot) Lücking, Umaña & Sipman

Thallus crustose, corticate or ecorticate. Photobiont *Trentepohlia*. Ascomata perithecia, globose to ampulliform, solitary, immersed in the substratum and exposing only the ostiolar region; perithecial wall black, in section completely carbonised, not differentiated internally. Ostiole apical. Interascal hyphae richly branched and anastomosed, sometimes inspersed, embedded in a non-amyloid, gelatinous matrix. Asci clavate to cylindrical, 1(–2)-spored, non-amyloid, at maturity lacking an ocular chamber. Ascospores dark brown when mature, broadly ellipsoid, fusiform or bacilliform, muriform, KI+ blue, typically with a gelatinous sheath. Conidiomata unknown. Chemistry: nil.

A genus of three widely scattered species (Costa Rica, New Guinea and Australasia) found on soil or bark in areas of high rainfall. It has been segregated from the related but heterogeneous genus *Laurera*, chiefly on the basis of its brown ascospores, supported by DNA-sequence data.

Key references: McCarthy & Kantvilas (1993); Lücking et al. (2007); Aptroot (2009); Aptroot & Lücking (2016).

1 *Aptrootia robusta* (P.M.McCarthy & Kantvilas) Aptroot

Fl. Australia 57A: 661 (2009); —*Laurera robusta* P.M.McCarthy & Kantvilas, *Lichenologist* 25: 51 (1993). Type: Tasmania, Crater Peak, 41°39'S 145°56'E, on soil, lichens and other cryptogams in rock crevices in alpine heathland, 1200 m, 16 February 1984, G. Kantvilas 405/84 & P.W. James (holo—HO!; iso—BM!).

Thallus ecorticate, continuous to sparingly rimose, smooth to irregularly rugulose-verruculose, matt or slightly glossy, pale to dull greenish grey or brownish grey, 50–100(–120) µm thick, forming extensive continuous colonies to 15 cm wide; photobiont with cells irregularly roundish, 10–30 µm wide. Perithecia 0.9–1.5 mm wide, typically almost entirely immersed, occasionally semi-emergent, becoming excavate with age; ostiole 50–100 µm wide. Interascal hyphae not inspersed, 0.5–0.8 µm thick. Asci 1-spored, 225–320(–400) × 70–120(–150) µm. Ascospores 145–239–360 × 65–100–140 µm, usually elongate to broadly ellipsoid to clavate, non-halonate, with 24–54 transverse and 12–20 longitudinal septa.

Widespread but rarely common on peaty, wet soil over metamorphosed Precambrian sediments and Ordovician conglomerate in the mountains of the west and south-west; also on granite on the higher pinnacles of Freycinet Peninsula. It is also known from a single locality in southern New South Wales (Pigeon House Mtn). This species is found in heathland and moorland in sheltered rock crevices and overhangs, on well-drained, steeply-sloping banks or on moist, flat ground. It is clearly very vigorous and competitive, and rapidly encrusts other small plants in its path. The black, gaping ostioles or excavate 'craters' of old, empty perithecia are very conspicuous; fertile thalli are not commonly encountered. *Aptrootia robusta* is one of several terricolous lichens with relatively huge ascospores that occur on soil on the mountains of the south-west; others include *Lepra gymnospora*, *Pertusaria flavoexpansa* and *Melanotopelia rugosa*.

1 This work can be cited as: Kantvilas G (2023). *Aptrootia*, version 2023:1. In MF de Salas (Ed.) *Flora of Tasmania Online*. 2 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). <https://flora.tmag.tas.gov.au/lichen-genera/aptrootia/>

2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, PO Box 5058, UTAS LPO, Sandy Bay, TAS 7005, Australia.

Mt Amos, 42°09'S 148°18'E, 480 m, 1991, G. Kantvilas 290/91 (HO); Sentinel Range, eastern summit, 42°52'S 146°15'E, 960 m, 1992, G. Kantvilas 95/92 (HO); summit of Black Bluff, 41°27'S 145°57'E, 1335 m, 2000, G. Kantvilas 131/00 (HO).

REFERENCES

Aptroot A (2009) Trypetheliaceae. *Flora of Australia* **57** 534–552.

Aptroot A, Lücking R (2016) A revisionary synopsis of the Trypetheliaceae (Ascomycota: Trypetheliales). *Lichenologist* **48** 763–982.

Lücking R, Sipman HJM, Umaña L, Chaves JL, Lumbsch HT (2007) *Aptrootia* (Dothideomycetes: Trypetheliaceae), a new genus of pyrenocarpous lichens for *Thelenella terricola*. *Lichenologist* **39** 187–193.

McCarthy PM, Kantvilas G (1993) *Laurera robusta* (Trypetheliaceae), a new alpine lichen from Tasmania. *Lichenologist* **25** 51–55.

INDEX

A		<i>Lepra gymnospora</i>1
<i>Aptrootia</i>1	M	
<i>Aptrootia robusta</i>1	<i>Melanotopelia rugosa</i>1	
<i>Aptrootia terricola</i>1	P	
L	<i>Pertusaria flavoexpansa</i>1	
<i>Laurera</i>1	T	
<i>Laurera robusta</i>1	<i>Trentepohlia</i>1	