



AUSTRALIDEA^{1 2}

Gintaras Kantvilas³

Australidea Kantvilas, Wedin & M.Svensson, *Lichenologist* 53: 400 (2021).

Type: *A. canorufescens* (Kremp.) Kantvilas, Wedin & M.Svensson

Thallus crustose, ecorticate. Photobiont a unicellular green alga with globose cells 6–15 µm diam., mostly aggregated in clumps. Ascomata apothecia, biatorine, basally constricted. Proper exciple usually persistent, in section cupulate, hyaline within, not inspersed, composed of a loose network of branched and anastomosed hyphae 1–1.5 µm wide in a gel matrix. Hypothecium hyaline. Hymenium mostly hyaline, not inspersed, intensely KI+ blue, rather coherent in water and K. Paraphyses simple or, very occasionally, sparsely branched, not capitate. Asci clavate, 8-spored, approximating the *Porpidia*-type: tholus amyloid, with a darker-staining ring structure with parallel or diverging sides; ocular chamber not developed. Ascospores simple, hyaline, non-halonate, ovate to ellipsoid, with a distinct wall c. 1 µm thick. Conidiomata not found. Chemistry: containing no substances detectable by TLC.

A monotypic genus, distinguished from superficially similar, corticolous genera with reddish brown, biatorine apothecia and relatively large, simple ascospores, by the combination of the particular ascus type, the anatomy of the exciple, and the mostly simple, non-capitate paraphyses. The ascus approximates the *Porpidia*-type, which is generally known only from genera that are either exclusively saxicolous (e.g. *Porpidia*), terricolous or overgrow epiphytic bryophytes (e.g. *Bryobilimbia*). Many of the species in these genera also have intensely dark-pigmented apothecia and, at times, septate spores. Molecular data place *Australidea* in the essentially tropical family Malmideaceae. *Malmidea* itself (not present in Tasmania) differs from *Australidea* in containing atranorin and having a dark brown hypothecium, an exciple of radiating, thick hyphae encrusted with crystals, branched, entangled paraphyses, and asci that lack internal structures in the tholus. Old Tasmanian records of *Malmidea leptoloma* (Müll.Arg.) Kalb & Lumbsch are based on herbarium specimens of *Australidea canorufescens*, dating from a time when the name *Lecidea leptoloma* was widely misapplied to several corticolous lecideoid species.

Key references: Kantvilas *et al.* (2021).

1 *Australidea canorufescens* (Kremp.) Kantvilas, Wedin & M.Svensson

Lichenologist 53: 401 (2021); —*Lecidea canorufescens* Kremp., *Verhandl. Zool.-Bot. Ges. Wien* 26: 454 (1876).

Lecidea immarginata R.Br. ex Cromb., *J. Linn. Soc., Bot.* 17: 400 (1880).

Thallus pale grey, at first smooth and rimose, soon becoming very uneven, scurfy and abraded, at times almost patchily soresiate, 25–100 µm thick. Apothecia to 1 mm diam.; disc pale brown to reddish brown, frequently a little mottled, rarely flesh-coloured or whitish and ± translucent when very young or over-mature, epruinose, plane when well-developed but becoming convex and immarginate when old; proper exciple concolorous with, paler or darker than the disc, usually persistent and excluded only in the oldest,

1 This work can be cited as: Kantvilas G (2023). *Australidea*, 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/australidea/>

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

most convex apothecia, in section usually dilute reddish brown at the outer, upper edge, hyaline within, 50–120 µm thick laterally, to 125–250 µm thick at the base. Hypothecium 25–100 µm wide, becoming massive and poorly differentiated from the exciple in old, very convex apothecia. Hymenium 60–100 µm thick, mostly hyaline but dilute reddish brown in the uppermost part; paraphyses 1.5–2.5 µm thick, in the upper part sometimes internally dilute reddish brown and gradually expanded to 3–5.5 µm wide but not capitate; asci 50–70 × 15–22 µm. Ascospores (10–)12–14.5–17(–18) × (6–)7–8.4–10(–11) µm.

Locally abundant on smooth bark in deep shade in the understorey of wet forests, especially callidendrous rainforests where *Atherosperma moschatum* is either the dominant or subdominant canopy species, or old-growth wet eucalypt forests where it colonises the bark of *Pomaderris apetala*; also known from south-eastern Australia and New Zealand. *Australidea canorufescens* is one of several crustose lichens with brown, biatorine apothecia, for example *Japewiella pruinosa* and species of *Bacidia*, but all of these are readily distinguished by their asci and ascospores.

Wellard Rivulet, 42°56'S 147°52'E, 1899, W.A. Weymouth (HO); Styx Road, 370 m, 1981, G. Kantvilas 1034/81 (BM, HO); Dip Falls, beside car park, 41°02'S 145°22'E, 210 m, 2019, G. Kantvilas 100/19 (HO, S).

REFERENCES

Kantvilas G, Wedin M, Svensson M (2021) *Australidea* (Malmideaceae, Lecanorales), a new genus of lecideoid lichens, with notes on the genus *Malcolmiella*. *Lichenologist* **53** 395–407.

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