

AUSTRALIAENA

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Australiaena Matzer, H. Mayrhofer & Elix, *Lichenologist* 29: 35 (1997)

From the Latin *australis* (southern) and the genus name *Dimelaena*, indicating its Australasian distribution and overall appearance.

Type: *A. streimannii* Matzer, H. Mayrhofer & Elix

Thallus crustose, thin to thick, often with radiate-plicate margins, usually continuous, rimose-areolate; areolae distinctly oblong in part; prothallus brown, dark brown or black at the margins of the thallus, occasionally radiate-plicate, or hypothallus absent. Isidia, soredia and lobules absent. Upper surface whitish to yellow, yellow-brown, brown, pale or dark grey. Upper phenocortex pseudoparenchymatous. Photobiont a unicellular green alga, forming a continuous layer, but also dispersed in the medulla, 5–12 µm diam. Medulla white. Lower cortex and rhizines absent, but often with a thick dark brown layer below. Ascomata apothecia, 0.2–1.0 mm wide, lecanorine to biatorine, immersed to sessile, ±round, glossy; disc dark brown to black, rarely medium brown, ±plane or becoming convex, epruinose; thalline exciple 55–120 µm wide, concolorous with the thallus, incomplete or becoming excluded; proper exciple 25–50 µm wide, dark brown to black, ±paler than the disc. Epihymenium 10–15 µm thick, pale to medium brown or pale yellow-brown; hymenium 30–100 µm thick, colourless; hypothecium 70–150 µm thick, usually colourless, rarely pale yellowish brown to brown. Paraphyses 1–3 (–4) µm thick below, apical cells swollen to 5–6 µm, simple or branched near the tips, rarely anastomosing, septate, with or without a dark brown cap. Asci clavate, *Lecanora*-type, with 8 or, rarely, fewer ascospores; apex wall layers thickened; apex amyloid, with a distinct axial mass. Ascospores 1-septate, olive then grey-brown or brown at maturity, ellipsoidal, 7–19 × 4–8 µm; internal wall thickenings variable, of the *Dirinaria*-, *Beltraminia*-, *Physconia*- or *Pachysporaria*-type; immature hyaline ascospores with apical internal wall-thickenings appearing before the septum is inserted (type-B ontogeny); torus absent; spore surface smooth or finely ornamented. Conidiomata pycnidial, immersed, uppermost part colourless, brown, grey or blackish; conidiogenous cells arising on short septate branched or unbranched conidiophores, terminal, solitary or paired, oblong, rarely bifurcate, forming conidia apically. Conidia colourless, simple, filiform, curved, 14–25 × 1 µm.

The monotypic *Australiaena* is known from siliceous rocks in tropical Australia and Papua New Guinea.

Reference

Matzer, M., Mayrhofer, H. & Elix, J.A. (1997), *Australiaena streimannii*, and new genus and species in the Physciaceae from tropical Australasia, *Lichenologist* 29: 35–44.

Australiaena streimannii Matzer, H. Mayrhofer & Elix, *Lichenologist* 29: 36 (1997)

T: Robin Falls, 13 km SSE of Adelaide River township, N.T., 13°21'S, 131°08'E, alt. 120 m, on shaded rock face near falls, 14 Apr. 1989, *H. Streimann 42134*; holo: CANB; iso: B.

Illustrations: M. Matzer, H. Mayrhofer & J.A. Elix, *op. cit.* 37–38, figs 1–3.

Description as for the genus.

Chemistry: Thallus K–, C–, KC– or KC+ reddish (soon disappearing), P–, UV± blue-white. Occurs in three chemotypes: chemotype I containing lobaric acid [major], oxolobaric acid [minor or trace], 4,5-dichlorolichexanthone [major or trace], 5-chlorolichexanthone [trace];

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<http://www.anbg.gov.au/abrs/lichenlist/Australiaena.pdf> (2011).

chemotype II containing gyrophoric acid [major], lecanoric acid [major or trace], 5-*O*-methylhiassic acid [major or trace], 4,5-dichlorolichexanthone [major or trace]; chemotype III containing perlatolic acid [major], 4,5-dichlorolichexanthone [major or trace].

Occurs on siliceous rocks in northern W.A. and N.T. and in north-eastern Qld; also in Papua New Guinea.

W.A.: Gibb River Rd, 69 km SW of Wyndham, *J.A.Elix 27849, H.T.Lumbsch & H.Streimann* (CANB); 7 km NW of Drysdale River Stn, *J.A.Elix 27992, H.T.Lumbsch & H.Streimann* (CANB). N.T.: Litchfield Natl Park, Tabletop Range, 25 km SE of Batchelor, *J.A.Elix 27642, H.T.Lumbsch & H.Streimann* (CANB); Baroalba Ck, 15 km SSE of Jabiru airfield, *H.Streimann 42366* (CANB). Qld: Mt Farrenden, 26 km SSW of Charters Towers, *J.A.Elix 20560 & H.Streimann* (CANB); The Maiden Mtn, 40 km WNW of Bowen, *H.Streimann 37768* (CANB).

Australiaena streimannii is characterised by the whitish, yellow-brown, pale brown to brown or grey crustose thallus with radiate-plicate margins, the lecanorine to biatorine apothecia, the 1-septate, olive to brown ascospores and by the presence of lobaric, gyrophoric or perlatolic acids.