



ROCCELLINA¹²

Gintaras Kantvilas³

Roccellina Darb., *Biblioth. Bot.* 9: 54 (1898).

Type: *R. condensata* Darb.

Thallus crustose, effigurate, placodioid or subfruticose, with a cortex of intertwined hyphae in a gelatinous matrix; medulla cretaceous, white throughout or darker in the lower part, sometimes containing calcium oxalate; prothallus sometimes present and conspicuous. Photobiont trentepohlioid, with cells suglobose, 8–20 µm diam., densely packed together. Ascomata apothecia, rounded to ± stellate-deformed, lecanorine, sessile and basally constricted, sometimes immersed, stromatoid and becoming divided. Disc brown to black, whitish grey-pruinose. Thalline margin prominent and persistent, entire. Proper exciple in section much reduced to excluded laterally, poorly differentiated at the base from the hypothecium. Hypothecium yellow-brown to opaque brown-black, K⁺ olive, often massive and extending downwards into the medulla. Hymenium hyaline, sometimes interspersed, hemiamyloid, KI⁺ pale blue, overlain by a brownish grey, crystalline, epithelial layer unchanged in K. Asci cylindrical, 8-spored, approximating the *vulgata*-type: walls and tholus weakly amyloid, with a reduced amyloid ring. Paraphysoids simple to sparsely branched and anastomosed, 1–2 µm wide; apices sometimes expanded to 2–4 µm, pigmented and ornamented. Ascospores transversely 3-septate, hyaline, fusiform to narrowly ellipsoid, sometimes slightly curved, not halonate; locules cylindrical. Conidiomata pycnidia, immersed or slightly emergent. Conidia filiform, curved, 9–17 × 1 µm. Chemistry: depsides, depsidones, dibenzofuranes or fatty acids; lecanoric acid is commonly present.

A genus of about 25 species, found mainly in the Southern Hemisphere, especially along the eastern Pacific coast. It typically grows on sea cliffs. Tasmania, with one species only, is at the periphery of its geographic and ecological distribution.

Key references: Tehler (1983); Galloway (2007).

1 *Roccellina exspectata* Tehler

Opera Bot. 70: 47 (1983). Type: Tasmania, Bass Strait, Curtis Island, southernmost point of the island, 39°28'S 146°39'E, completely covering weathered rock faces in easterly aspect in semi-exposed positions, 11 February 1971, *R.B. Filson* 12225 (holo—MEL!).

Thallus pale greenish grey to yellowish brown, sorediate, crustose when young, at the margins soon effigurate to placodioid with lobes radiating, strongly convex, 0.5–2 mm wide, to 1–3 mm thick, centrally imbricate, transversely cracked, wrinkled to verruculose to bullate; soralia laminal, punctiform, sometimes becoming erose, 0.3–1 mm wide, remaining discrete or coalescing; soredia whitish grey; prothallus inapparent or forming an effuse to faintly byssoid, whitish to pale brownish leading edge to 1–2 mm wide in young thalli; medulla mostly white, blackish brown in the lowermost part, containing calcium oxalate.

1 This work can be cited as: Kantvilas G (2023). *Roccellina*, **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/roccellina/> (accessed 31 October 2022).

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

Apothecia very rare, 0.7–3 mm wide, sessile, scattered, roundish or somewhat deformed-stellate, not stromatoid; thalline margin inrolled, crenate, in section 150–300 µm thick. Hymenium 100–120 µm thick, interspersed with occasional oil droplets; asci 80–105 × 16–18 µm; paraphysoids mostly with pigmented, spinous apices. Ascospores ellipsoid to fusiform, 15–18.2–21(–22) × (4.5–)5–5.4–6 µm, with rounded apices.

Chemical composition: lecanoric acid; thallus K⁻, KC⁺ red, C⁺ red, P⁻, UV⁻.

Restricted in Tasmania to the north coast, where it grows on quartzitic cliffs and large rock outcrops, and to the islands of Bass Strait, where it grows on granite; also known from New Zealand's northern off-shore islands. It forms extensive, continuous colonies of contiguous or overlapping thalli, sometimes covering several square metres, usually on sheltered, vertical or slightly overhanging rock faces. Only the type specimen is fertile and most populations consist of richly sorediate, sterile thalli. The placodioid, effigurate thallus is reminiscent of species of *Placopsis*, although that genus is easily distinguished by its conspicuous cephalodia and, microscopically, by its simple ascospores and *Trapelia*-type asci. Furthermore, no species of *Placopsis* are known from coastal cliffs, nor do they form the continuous expanses characteristic of *Roccellina*.

Kent Group, South West Island, 39°31'S 147°07'E, 90 m, 1988, J.S. *Whinray* 1787 (HO, MEL); Bluff Hill Point, 41°01'S 144°37'E, 5 m, 2001, G. *Kantvilas* 1282/01 & J. *Jarman* (HO, NY, UPS); Goat Island, 41°08'S 146°08'E, 5 m, 2016, G. *Kantvilas* 393/16 (HO).

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