



PLACIDIUM ¹

Gintaras Kantvilas ²

Placidium A.Massal., *Symm. Lich. Nov.*: 75 (1855).

Type: *P. michelii* A.Massal.

Thallus squamulose; squamules dispersed, contiguous or imbricate, lacking rhizines, attached to the substratum by hyaline rhizoidal hyphae; upper cortex composed of angular or roundish cells 7–16 µm wide, sharply delimited from the algal layer; lower cortex sometimes developed. Photobiont a green coccoid alga (*Myrmecia*) with globose to subglobose cells 6–15 µm wide. Ascumata perithecia, immersed, broadly pyriform to subglobose, lacking an involucrellum. Exciple mostly hyaline, composed of intertwined, tangentially arranged hyphae. Periphyses 25–40 µm long. Hymenium I+ reddish brown, KI+ blue, lacking algal cells. Paraphyses absent. Asci 8-spored, cylindrical, with a thin, KI+ blue outer wall, especially at the apex, a well-developed, non-amyloid tholus and, at least when young, a long, narrow ocular chamber. Ascospores simple, hyaline, ellipsoid to subglobose, uniseriate in the ascus. Pycnidia laminal and immersed, or marginal and protruding. Conidia oblong-ellipsoid or bacilliform. Chemistry: nil.

One of several squamulose genera of the large family Verrucariaceae, included in former times within the genus *Catapyrenium*. *Placidium* contains 28 species that colonise consolidated soil, plant debris, bryophytes or, rarely, bark, and is found mostly in low rainfall areas in temperate climates. Three species are reported for Australia, and Tasmania, with just one, is very much at the ecological and geographical periphery of the distribution of the genus. In Tasmania, *Placidium* is most likely to be confused with *Endocarpon* with which it typically grows, and which differs chiefly by having the squamules usually attached by thick rhizines, photobiont cells present within the hymenium, usually 1–2-spored asci and muriform ascospores. Sterile material is difficult if not impossible to identify.

Key references: Breuss (2001); Breuss & Nimis (2024).

1 *Placidium squamulosum* (Ach.) Breuss

Ann. Naturhist. Mus. Wien 98B (Suppl.): 39 (1996); —*Endocarpon squamulosum* Ach., *Methodus*: 126 (1803).

Squamules pale beige-brown to dark brown, 1–4 mm wide, to 0.5 mm thick, roundish or lobate, dispersed or contiguous, less commonly imbricate, plane to convex, with the margins often a little thickened, raised or slightly revolute. Perithecia laminal, visible as black-brown, bulbous swellings on the thallus surface, in section 0.2–0.6 mm wide; exciple 20–40 µm thick. Asci 60–80 × 10–16 µm. Ascospores ellipsoid, 10–12.5–15(–16) × 5–6.0–7(–8) µm. Pycnidia laminal, immersed; conidia ellipsoid, 3–5 × 2 µm.

A cosmopolitan species, usually found on rather alkaline soils in dry, open grasslands. It is rare (or overlooked) in Tasmania, occurring on consolidated soil in sunny gaps in dry sclerophyll forest or grassland; one collection is from coastal calcarenite. Its Tasmanian distribution suggests a species in decline as its habitat becomes increasingly fragmented and disturbed by clearing, grazing and property development. It is usually seen in very small patches in protected microhabitats amongst small stones or on thin soil on rock ledges. Tasmanian specimens are generally somewhat smaller than those studied and described by Breuss

1 This work can be cited as: Kantvilas G (2024). *Placidium*, version 2024:1. 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/placidium/>

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

