

Verrucaria buelliicola P.M.McCarthy

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T: Grove Creek, 12 km NE of Canowindra, near Canowindra–Orange road, N.S.W., 33°28'S, 148°46'E, alt. c. 430 m, limestone outcrops, parasitic on *Buellia albula* (Nyl.) Müll. Arg. (Physciaceae), 17 Dec. 2002, P.M.McCarthy 1850 & J.A.Elix; holo: CANB.

Illustration: P.M.McCarthy, *op. cit.* 5, fig. 1.

Thallus parasitic on *Buellia albula*, pale to medium greenish grey, of scattered or contiguous areolae, or forming ±orbicular, areolate thalli 4–10 mm wide. Areolae (0.3–) 0.6–1.0 (–1.5) mm wide, 0.15–0.25 (–0.35) mm thick, ±isodiametric to irregular, sharply angled and plane when closely arranged in a discrete thallus, or the margins more rounded and the surface slightly to strongly convex when areolae are solitary or in small clusters; surface dull, minutely uneven, sometimes rimulose; isolated areolae often markedly attenuated towards the base. Epinecral layer hyaline, 10–20 (–30) µm thick. Cortex 1–2 cells thick, pseudoplectenchymatous; cells moderately thick-walled, with the uppermost part of the wall dark brown, 4–8 µm diam. Algal layer 40–80 (–120) µm deep; cells 5–10 (–16) µm diam. Perithecia 1–4 (–8) in most areolae, dull black, semi-immersed to almost completely immersed, 0.14–0.22 (–0.25) mm diam., slightly convex to hemispherical above, lacking an involucrellum. Perithecial apex rounded or ±plane; ostiole inconspicuous or in a shallow, 15–30 (–40) µm wide depression. Exciple dark greenish brown to ±black and 30–55 µm thick near the apex, initially hyaline to pale brown at the sides and base, but becoming dark greenish brown to brown-black and 12–20 µm thick. Centrum 0.12–0.18 mm wide. Periphyses 10–20 × 2–4 µm. Asci clavate to cylindroclavate or narrowly obclavate, 60–70 × 17–22 µm. Ascospores mostly ellipsoidal to broadly ellipsoidal, massed or irregularly biserial in the ascus, (13–) 17 (–20) × (7–) 9.5 (–12) µm. Conidiomata not seen.

Known from the type locality on the boundary of the Central Tablelands and Central-Western Slopes of N.S.W. and from Kangaroo Island, S.A.

S.A.: Cape St Albans, Kangaroo I., *G.Kantvilas 168/10* (AD, HO).

The parasite displaces the host mycobiont and incorporates the protococcoid algal cells of the host into a new and independent *Verrucaria* thallus. The habit of a parasitic *Verrucaria* (small- or large-areolate, subsquamulose or placoid) as well as thalline and areolar dimensions are largely determined by the growth-form of the host species.

