

## Verrucaria minor Breuss

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*Thrombium lecideoides* A.Massal. var. *minuta* A.Massal. (1852); *Verrucaria lecideoides* (A.Massal.) Trevis. var. *minuta* (A.Massal.) Hepp, *Lich. Eur.* 683 (1860), non *V. minuta* (Müll.Arg.) Stizenb. (1895). T: Streitberg, [Bayern, Germany], *F.C.G.Arnold*; holo: M n.v.; iso: MEL.

Illustration: P.M.McCarthy, *Muelleria* 8: 102, fig. 2 (1994).

Thallus epilithic, deeply areolate, pale to medium greenish grey to grey-brown, matt,  $\pm$ smooth, 80–120  $\mu$ m thick, corticate; areolae plane to slightly convex, 0.1–0.6 mm wide; side walls of areolae concolorous to dark brown. Algae globose, 7–15  $\mu$ m diam. Prothallus dark grey to black or not apparent; basal layer not apparent. Perithecia two-thirds immersed to almost superficial, usually solitary at the margins of areolae or between areolae, 0.12–0.24 mm diam., black; apex slightly to strongly convex; ostiole inconspicuous or in a 20–40  $\mu$ m wide depression. Involucrellum extending to exciple base level, 25–45  $\mu$ m thick. Exciple 15–20  $\mu$ m thick, hyaline to greenish black. Centrum 0.08–0.12 mm wide. Periphyses 15–20  $\times$  2–3  $\mu$ m. Asci 39–53  $\times$  13–17  $\mu$ m. Ascospores narrowly to broadly ellipsoidal, 9–18  $\times$  5–8  $\mu$ m.

Grows on exposed sandstone, basalt and granite in temperate and semi-arid localities in southern S.A., N.S.W. and Tas., and in central Qld. Also in central and southern Europe where it is almost exclusively calcicolous, and in North Africa and south-western U.S.A. (Arizona).

S.A.: Arkaroola, *W.H.Ewers* 6957 (MEL). Qld: Bell Ck, Inverness Rd, 27 km ENE of Biloela, *H.Streimann* 52536 (CANB). N.S.W.: near road to Numeralla, 5 miles [c. 8 km] E of Cooma, 2 Dec. 1967, *W.A.Weber & D.McVean* (COLO); Crossley Bridge, Turon R., Sofala, 11 Feb. 1991, *P.M.McCarthy* (MEL). Tas.: Pontville Small Arms Range Complex, 42°41'S, 147°17'E, 50 m alt., on basalt boulders in grassland-herbfield, *G. Kantvilas* 162/03, 12.vi.2003 (HO 521997).

This grey and rather deeply areolate species has quite prominent perithecia that grow between and at the margins of the areolae. *Verrucaria fuscella* has a thicker thallus with a thick black basal layer and more deeply immersed perithecia that are  $\pm$ central on areolae rather than marginal or interareolar.

