

VERRUCARIA

Verrucaria Schrad., *Spicil. Fl. Germaniae* 1: 108 (1794), *nom. cons.*; from the Latin *verruca* (a wart) and the suffix *-aria* (indicating possession), in reference to the prominent perithecia of many species.

Type: *V. rupestris* Schrad.

Thallus crustose, immersed in the substratum, semi-immersed or \pm superficial, continuous to cracked, areolate or subsquamulose, corticate or ecorticate, with or (usually) without black ridges or punctae, with or without a prothallus and hypothallus. Algae green, unicellular. Ascromata perithecia, immersed to superficial, with or without a dark greenish brown or dark brown to black involucrellum, the latter ranging from apical and vestigial, or extending part of the way down the perithecium, or do not to level with the base of the exciple, or partly or completely enclosing the base of the exciple. Exciple hyaline to \pm black. Hymenium I+ reddish brown, less commonly I+ blue. Periphyses simple or branched. Paraphyses absent at maturity. Asci fissitunicate, 8-spored, non-amyloid, clavate to cylindroclavate; apex rounded, usually with a broad ocular chamber that often becomes excluded at maturity. Ascospores simple, colourless. Pycnidia rare; conidia simple, colourless. Chemistry: No substances detected.

This genus of c. 300 species is found mainly in warm-temperate to Arctic-alpine regions of both Hemispheres; less diverse and common in arid and wet-tropical areas. Species grow on maritime, aquatic and non-aquatic rocks, rarely on soil and (not in Australia) on bark; one foliicolous species has been reported.

Forty-one species are currently known in Australia, mainly from eastern and south-eastern coastal and hinterland areas. Nevertheless, the genus must be regarded as still rather poorly known, since most species are known from no more than a handful of sites and many collections remain unidentified.

Verrucaria is distinguished from other crustose genera of Verrucariaceae by its simple ascospores. However, the genus requires a thorough world-wide revision because the circumscription of most species, and especially their variability, is poorly understood. Thus, for example, hundreds of taxa have been described from central and southern Europe, often based on overly subtle differences in thallus habit, colour and anatomy and perithecial structure and dimensions.

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