



BRIANARIA ¹

Gintaras Kantvilas ²

Brianaria S.Ekman & M.Svensson, *Lichenologist* 46: 291 (2014).

Type: *B. sylvicola* (Flot. ex Körb.) S.Ekman & M.Svensson

Thallus crustose, ± smooth to scurfy, verrucose or granular. Photobiont a green coccoid alga of two types: globose, with cells 5–12 µm wide; and irregularly ellipsoid, with cells 5–12(–15) µm. Ascomata apothecia, immarginate, strongly convex to globose, sometimes becoming tuberculate. Disc pale to dark bluish grey, brown or black, frequently piebald, epruinose. Proper exciple absent. Hypothecium hyaline or variously pigmented with greenish or brownish pigments, sometimes opaque. Hymenium hyaline to variously dilutely pigmented, most intensely in the uppermost part, KI+ blue, remaining strongly conglutinated in K. Paraphyses often rather scant, simple, sparingly branched or anastomosed, with apices sometimes thickened and externally pigmented. Asci 8-spored, of the *Psora*-type: clavate-cylindrical, with an amyloid wall and a well-developed, amyloid tholus penetrated by a more intensely amyloid, rather broad, diverging ring-structure; ocular chamber not developed. Ascospores simple or rarely 1-septate, hyaline, ellipsoid, ovoid-ellipsoid or oblong-ellipsoid, non-halonate. Conidiomata pycnidia, immersed. Conidia bacilliform to oblong or obovoid. Chemistry: nil.

A genus of four, diminutive, crustose species, widely distributed in temperate regions in both hemispheres, and found on rocks and soil in sheltered microhabitats, mostly in forests and woodlands. Although superficially similar to, and previously included in the genus *Micarea*, phylogenetic studies have confirmed the earlier view of Coppins (1983) that these two genera are unrelated. The closest relatives of *Brianaria* are the squamulose *Psora* and the crustose *Protoblastenia*.

Key references: Coppins (1983); Ekman & Svensson (2014); Kantvilas & Coppins (2019); Cannon *et al.* (2022).

1 Apothecia to 0.5(–0.8) mm diam.; ascospores 3–4 µm wide
Apothecia to 0.3 mm diam.; ascospores 2–2.5(–3) µm wide

1 *B. sylvicola*
2 *B. tuberculata*

1 *Brianaria sylvicola* (Flot. ex Körb.) S. Ekman & M. Svensson

Lichenologist 46: 292 (2014); —*Lecidea sylvicola* Flot. ex Körb., *Syst. Lich. Germ.*: 254 (1855); *Micarea sylvicola* (Flot. ex Körb.) Vězda & V.Wirth, *Folia Geobot. Phytotax.* 11: 99 (1976).

Thallus effuse, unevenly scurfy-verrucose, pale bluish grey. Apothecia numerous, scattered or crowded, ± globose from the outset, 0.2–0.5(–0.8) mm wide, to c. 1.2 mm wide when tuberculate, dark blue-grey to black, matt. Hypothecium 60–200 µm thick, opaque, aeruginose green-black with some purple-brown pigment, K+ bright aeruginose green, N+ crimson-red. Hymenium 35–60 µm thick, hyaline to suffused aeruginose green, K+ bright aeruginose green, N+ crimson-red, with the pigment most intense in the uppermost and lowermost parts, sometimes diffusing between the asci; paraphyses mostly 0.8–1.5 µm thick, with apices not capitate; asci 30–45 × 7–12 µm. Ascospores (6.5–)7–8.6–10 × (2.5–)3–3.6–4.5 µm. Pycnidia not seen; conidia reported as 3.5–6 (–7) × 1–2 µm (Cannon *et al.* 2022).

1 This work can be cited as: Kantvilas G (2024). *Brianaria*, 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/brianaria/>

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

Widely distributed in temperate areas where it occurs on soil and stones in dry, sheltered, shaded microhabitats. In Tasmania, it is found in rainforest and wet eucalypt forest, especially around the roots of large, over-turned trees. The combination of photobiont type, apothecial pigmentation, ascus type, and ascospore size and shape distinguishes *B. sylvicola* from several superficially similar species, such as *Micarea almbornii* Coppins, *M. melaenida* (Nyl.) Coppins and *Psilolechia clavulifera* (Nyl.) Coppins, which can all occur in similar habitats.

W of Tahune Bridge in the Warra SST, 43°06'S 146°42'E, 100 m, 1997, G. Kantvilas 256/97 (E, HO); track to Moonlight Ridge, 43°28'S 146°50'E, 400 m, 1997, G. Kantvilas 81/97 (HO); Gordon Road, E of Humboldt Divide, 42°45'S 146°30'E, 440 m, 2016, J. Jarman s.n. (HO).

2 *Brianaria tuberculata* (Sommerf.) S. Ekman & M. Svensson

Lichenologist 46: 292 (2014); —*Lecidea tuberculata* Sommerf., *Suppl. Fl. Lapp.*: 160 (1826).

Essentially identical to *B. sylvicola* with respect to thallus morphology and apothecial pigmentation and anatomy, and differing by having somewhat smaller apothecia, not exceeding 0.3 mm width, and narrower ascospores, 6–10 × 2–3 µm. These differences are not as clear-cut in the single Tasmanian specimen as they are described in European literature. The Tasmanian specimen was collected from dolerite stones in a sheltered underhang in wet forest, a habitat similar to that of *B. sylvicola*.

Track to Wylds Craig, 42°29'S 146°25'E, 850 m, 2014, G. Kantvilas 44/14 (HO).

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