



BRYONORA¹²

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Bryonora Poelt, *Nova Hedwigia* 38: 74 (1983).

Type: *B. castanea* (Hepp) Poelt

Thallus crustose, squamulose or small-fruticose, with a poorly defined, \pm parenchymatous cortex of roundish to rhomboid cells 6–10 μm wide, overlain by a hyaline epicortex. Photobiont a unicellular green alga with \pm globose cells 8–18 μm wide. Ascomata apothecia, biatorine to lecanorine, with the thalline margin often excluded. Disc red-brown to dark brown, epruinose. Proper exciple persistent, cupulate, composed of radiating, anastomosing hyphae to c. 2 μm thick, with thin lumina and with the outermost cells swollen, brownish, 6–10 μm wide and forming a parenchymatous cortex. Hypothecium hyaline, with photobiont cells in the lower part. Hymenium hyaline, amyloid, not interspersed, overlain by a red-brown epihymenial layer \pm unchanged in K. Asci clavate, 8-spored, of the *Lecanora*-type: with a well-developed, amyloid tholus, penetrated entirely by a non-amyloid to weakly amyloid, cylindrical to barrel-shaped *masse axiale*; ocular chamber \pm absent. Paraphyses robust, mostly simple, coherent in K, with the apices capitate and brown. Ascospores simple or rather spuriously transversely septate, hyaline, non-halonate, fusiform to ellipsoid. Conidiomata pycnidia, immersed. Conidia bacilliform. Chemistry: depsidones, dibenzofuranes or lacking substances.

A widespread genus of about 12 species found on soil, mosses or dead vascular plants at alpine elevations or in the high latitudes. The Himalayas are a centre of species diversity; one species is recorded for Australasia.

Key references: Poelt (1983); Poelt & Obermayer (1991); Holtan-Hartwig (1991); Kantvilas (2006).

1 *Bryonora castanea* (Hepp) Poelt

Nova Hedwigia 38: 86 (1983); —*Biatora castanea* Hepp, *Fl. Europ.*: 270 (1857).

Thallus crustose, whitish, very thin to endophloeodal. Apothecia to 1.7 mm wide, crowded and overlapping, basally constricted to adnate; disc plane to undulate; thalline margin excluded; proper exciple concolorous with the disc or slightly paler, in section 30–80 μm thick. Hypothecium 50–60 μm thick. Hymenium 50–70 μm thick; asci 40–65 \times 15–24 μm ; paraphyses 1.5–2.5 μm thick, with the apices expanded to 3–5 μm . Ascospores ellipsoid, 12–17.6–24 \times 5–7.4–10.5 μm , mostly simple or occasionally with 1–2 rather spurious, crooked septa. Pycnidia not known.

Chemistry: norstictic acid, best confirmed by the formation of red, needle-like crystals in sections of the thallus and apothecia following the addition of K.

A bipolar species, found in alpine or polar environments on mosses, dead grasses and herbs, on the ground or over large boulders. It is very rare in Tasmania and known only from the Ben Lomond Plateau where, despite intensive searches, it has not been sighted since 1998. Although very small and inconspicuous, this

1 This work can be cited as: Kantvilas G (2023). *Bryonora*, version 2023:1. 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/bryonora/> (accessed 30 September 2022).

2 This treatment was supported by the Australian Biological Resources Study's National Taxonomy Research Grant Program (grant no. 4-EHINNOL).

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

species is easily recognised by its rather flat, reddish brown, clustered apothecia and, anatomically, by the combination of *Lecanora*-type asci, capitate paraphyses, relatively large ascospores and the presence of norstictic acid.

Ben Lomond, northern plateau, 41°36'S 147°40'E, 1972, *J. Adams 72/1191* (HO); western flanks of Legges Tor, 41°32'S 147°39'E, 1530 m, 1998, *G. Kantvilas 110/98* (HO).

REFERENCES

- Holtan-Hartwig J (1991) A revision of the lichens *Bryonora castanea* and *B. curvescens*. *Mycotaxon* **40** 295–305.
- Kantvilas G (2006) Additional lichen records from Australia 59. *Bryonora castanea*. *Australasian Lichenology* **59** 16–18.
- Poelt J (1983) *Bryonora*, eine neue Gattung der Lecanoraceae. *Nova Hedwigia* **38** 73–111.
- Poelt J, Obermayer W (1991) Beiträge zur Kenntnis der Flechtenflora des Himalayas II. Die Gattung *Bryonora* (Lichenes, Lecanoraceae) zugleich eine Revision aller Arten. *Nova Hedwigia* **53** 1–26.

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