

## ENDOHYALINA

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*Endohyalina* Marbach, *Biblioth. Lichenol.* 74: 201 (2000) *emend.* Giralt, P.P.G.Boom & Elix, *Mycol. Progr.* 9: 40 (2010)

From the Latin *endo* (within, inside) and the Greek *hyalos* (glass, crystal), in reference to the pale to colourless inner part of the proper exciple.

Type: *E. ericina* (Nyl.) Giralt, P.P.G.Boom & Elix

Thallus crustose to subsquamulose when autonomous, superficial, effuse, continuous to rimose and areolate or verrucose, or absent to immersed when lichenicolous; lichenolous thalli endokapylic to epikapylic on several crustose or fruticose hosts. Isidia, soredia and blastidia absent. Upper surface, whitish, pale grey, grey, grey-brown or brown. Prothallus present or absent. Photobiont a unicellular green alga, or absent in lichenicolous individuals. Ascomata apothecia, lecideine, immersed to sessile; disc black, ±plane or becoming weakly convex, epruinose. Proper exciple poorly developed, with a dark outer part with hyphae having ±swollen cells and a paler to colourless inner part with hyphae similar in structure and orientation to the paraphyses. Epihymenium dark brown; hymenium colourless, interspersed with oil globules or not; hypothecium pale to dark brown. Paraphyses simple, apical cells ±enlarged, brown. Asci clavate, *Bacidia*-type, usually 8-spores, rarely with 4 or 6 ascospores; apex wall layers thickened; apex amyloid, with a distinct non-amyloid conical axial mass. Ascospores *Dirinaria*-type, brown at maturity but with the ends paler, 1-septate, small, ellipsoidal or fusiform, with internal wall thickenings mostly of the *Dirinaria*-type, but also grading into the *Milvina*-, *Physconia*- or *Pachysporaria*-types; apical internal wall-thickenings appearing before the septum is inserted (type-B ontogeny); torus present or not; spore surface smooth to weakly ornamented. Conidiomata pycnidial, immersed in the thallus, brown-black; conidiogenous cells enteroblastic, pleurogenous, branched. Conidia short-bacilliform.

*Endohyalina* is a genus of six species, one of which occurs in south-eastern Australia.

### References

Giralt, M., Van den Boom, P.P.G. & Elix, J.A. (2010), *Endohyalina*, the genus in the Physciaceae to accommodate the species of the *Rinodina ericina*-group, *Mycol. Progr.* 9: 37–48.

Kaschik, M. (2006), Taxonomic studies on saxicolous species of the genus *Rinodina* (lichenized Ascomycetes, Physciaceae) in the Southern Hemisphere with emphasis in Australia and New Zealand, *Biblioth. Lichenol.* 93: 1–162.

Marbach, B. (2000), Corticole und lignicole Arten der Flechtengattung *Buellia sensu lato* in den Subtropen und Tropen, *Biblioth. Lichenol.* 74: 1–384.

***Endohyalina insularis*** (Arnold) Giralt, P.P.G.Boom & Elix, *Mycol. Progr.* 9: 44 (2010)

*Buellia saxatilis* f. *insularis* Arnold, *Verh. Zool.-Bot. Ges. Wien* 46: 119 (1896); *Rinodina insularis* (Arnold) Hafellner, *Beih. Nova Hedwigia* 62: 87 (1979). T: Plan [de Coronas], South Tirol, 1895, *F.G.C.Arnold*; holo: M n.v.

Illustrations: J.Hafellner, *Beih. Nova Hedwigia* 62: 89, fig. 8 (1979); R.Moberg, *Nordic Lichen Fl.* 2: 104 (2002); M.Kaschik, *Biblioth. Lichenol.* 93: 126, fig. 83 (2006), all as *Rinodina insularis*.

Thallus lichenicolous, initially without a visible thallus, later with small brown squamules 0.3–0.5 mm wide; prothallus evanescent or absent. Apothecia 0.2–0.7 mm wide, immersed to

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adnate, scattered to contiguous; proper margin entire, excluded with age. Excipulum 40–60  $\mu\text{m}$  thick, dark brown; inner c. 20  $\mu\text{m}$  paler. Epihymenium 5–10  $\mu\text{m}$  thick, dark brown, K–, N–; hymenium 50–80  $\mu\text{m}$  thick, not interspersed; hypothecium 110–120  $\mu\text{m}$  thick including stipe, brown to dark brown, K–. Paraphyses 1.5–2.0  $\mu\text{m}$  wide; apices 3–6  $\mu\text{m}$  wide, with brown caps. Ascospores *Dirinaria*-type, ellipsoidal, 10–17  $\times$  5–9  $\mu\text{m}$ . *Pycnidia* not seen.

*Chemistry*: Containing diploicin (major), isofulgidin (trace), fulgidin (trace),  $\pm$ caloploicin (minor),  $\pm$ dechorodiploicin (trace).

Occurs in mountains in south-eastern Australia (N.S.W. and A.C.T.), where it is lichenicolous on *Lecanora rupicola* (L.) Zahlbr. or *L. swartzii* (Ach.) Ach.; also in Europe, North and South America and New Zealand.

N.S.W.: Perisher Ck, between Smiggin Holes and Guthega, Mount Kosciuszko Natl Park, *H.Mayrhofer 15430a, H.Hertel & R.Filson 2802* (GZU). A.C.T.: summit of Mt Aggie, Brindabella Ra., 43 km WSW of Canberra, *G.Rambold 4058 & J.A.Elix* (M).

This species is characterised by being lichenicolous, having lecideine apothecia, *Bacidia*-type asci and *Dirinaria*-type ascospores.