

## RINODINELLA

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*Rinodinella* H.Mayrhofer & Poelt, *Hoppea* 37: 91 (1978)

From the genus name *Rinodina*, and the Latin suffix *-ellus* (resembling, but smaller).

Type: *R. controversa* (A.Massal.) H.Mayrhofer & Poelt

Thallus crustose, subendolithic or epilithic and then rimose and areolate, occasionally appearing sublobate at the margin. Isidia, soredia and blastidia absent. Upper surface whitish, grey, grey-brown or dark brown, usually corticate. Prothallus present or absent. Medulla well defined, white. Lower cortex absent. Ascomata apothecia, lecanorine, biatorine or lecideine, immersed to sessile,  $\pm$ constricted at the base; disc pale to dark brown or black,  $\pm$ plane, concave or becoming convex, epruinose. Excipulum thin, poorly differentiated or not, *aethalia*-type; occasionally differentiated into a paler inner and a darker outer part. Epithemium dark olive-green to brown or black; hymenium colourless, rarely interspersed with oil globules; hypothecium usually colourless, rarely pale yellowish brown to red-brown or dark brown. Paraphyses simple or sparingly branched near the tips; apical cells usually expanded. Asci clavate, *Lecanora*-type or *Bacidia*-type, with 8 ascospores; apex wall layers thickened; apex amyloid, with a distinct axial mass. Ascospores *Rinodinella*-type, 1-septate, colourless, pale grey, pale grey-brown to pale brown, ellipsoidal to weakly subcylindrical, becoming constricted at the septum, often curved, very thin-walled (to 0.5  $\mu$ m thick), never with wall thickenings; internal apical walls becoming distinct before the septum is inserted (type-A ontogeny); torus thin or absent; spore surface smooth or finely ornamented. Conidiomata pycnidial, immersed in the thallus; conidiophores septate, simple or branched; conidiogenous cells terminal, forming conidia apically. Conidia bacilliform.

A genus of four species, one of which occurs in temperate Australia where it grows on siliceous rocks, especially in coastal areas.

### References

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- Elix, J.A. (2010), A new species, combinations and synonymy of saxicolous species of *Buellia sens. lat.* and *Rinodinella* (Physciaceae: Ascomycota) in Australia, *Australas. Lichenol.* 66: 44–49.
- Mayrhofer, H. (1984), Die saxicolen Arten der Flechtengattung *Rinodina* und *Rinodinella* in der alten Welt, *J. Hattori Bot. Lab.* 55: 327–493.
- Mayrhofer, H. (1984), The saxicolous species of *Dimelaena*, *Rinodina* and *Rinodinella* in Australia, *Beih. Nova Hedwigia.* 79: 511–536.
- Mayrhofer, H. & Poelt, J. (1978), *Rinodinella*, eine neue Gattung der Flechten familie *Physciaceae*, *Hoppea* 37: 89–105.

***Rinodinella fertilis* (Körb.) Elix, *Australas. Lichenol.* 66: 46 (2010)**

*Buellia fertilis* Körb., *Abh. Schles. Ges. Vaterl. Kult. Abth. Naturwiss.* 2: 33 (1862). T: “ad saxa arenaria Novae Hollandiae” [Australia], “Missit beat”, *F. v. Hochstetter s.n.*: lecto: L 910.128.1111; isolecto L 910.128.1110, *fide* J.A.Elix, *loc. cit.*

*Buellia halophila* Müll.Arg., *Bull. Herb. Boissier* 1: 52 (1893); *Rinodinella halophila* (Müll.Arg.) H.Mayrhofer, *J. Hattori Bot. Lab.* 55: 480 (1984). T: Cheltenham, Vic., 1890, *F.R.M. Wilson 734*; holo: G n.v.

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<http://www.anbg.gov.au/abrs/lichenlist/Rinodinella.pdf> (2011).

Thallus crustose, epilithic, 0.3–1.0 mm thick, continuous to cracked and areolate, up to 3 cm wide; areolae contiguous or scattered, 0.3–1.0 mm wide,  $\pm$ subrectangular, plane to convex, becoming thick and lifting off the substratum; prothallus absent. Upper surface pale fawn to ochre, dull, epruinose, granular, partly phenocorticate. Medulla 0.2–0.8 mm thick, white; calcium oxalate usually present ( $H_2SO_4+$ ), IKI–. Apothecia lecideine, 0.1–0.6 mm wide, numerous, round, initially immersed but soon adnate to sessile; proper margin thin, persistent, rarely excluded with age; disc black, epruinose, plane or concave. Excipulum 50–70  $\mu m$  thick, distinct, not distinctly differentiated into an inner and outer part, dull black-brown throughout, becoming carbonaceous. Epithymenium 5–10  $\mu m$  thick, dark olive-green to brown, K–, N+ purple-brown; hymenium 45–60  $\mu m$  thick, not interspersed; hypothecium c. 50  $\mu m$  thick, mid-brown to reddish brown. Paraphyses simple to moderately branched, c. 2  $\mu m$  wide, with distinctly broadened apices 5–6  $\mu m$  wide and brown caps. Asci *Bacidia*-type. Ascospores olive-grey to brown, ellipsoidal,  $\pm$ constricted at septum, 10–15  $\times$  5–8  $\mu m$ . Pycnidia not seen.

This species is characterised by the pale fawn to ochre crustose thallus that becomes areolate, thick and lifting from the substratum, the lecideine apothecia, the 1-septate, olive-grey to brown *Rinodinella*-type ascospores and by the presence of either norstictic or hypostictic acids.

Two varieties are separated by thallus chemistry.

Thallus K+ yellow then dark red; norstictic acid present ..... **a. var. fertilis**  
Thallus K+ weak yellow then pale red; hypostictic acid present ..... **b. var. hypostictica**

**a. *Rinodinella fertilis* (Körb.) Elix var. *fertilis***

Illustrations: H. Mayrhofer, *J. Hattori Bot. Lab.* 55: 480, fig. 109 (1984); H. Mayrhofer, *Beih. Nova Hedwigia* 79: 513, fig. 1 (1984); both as *R. halophila*,

*Chemistry*: Thallus K+ yellow then dark red, C–, P+ orange-red; containing norstictic acid (major), connorstictic acid (minor or trace).

Occurs in southern and south-eastern Australia (S.A., N.S.W. and Vic.); also in South Africa.

S.A.: Kanmantoo, 40 km SE of Adelaide, *M. & H. Mayrhofer 2802* (GZU). N.S.W.: Baragoot Pt, 3.5 km S of Bermagui, *J.A. Elix 4586* (CANB); Bermagui Bay, *J.A. Elix 28824* (CANB).

**b. *Rinodinella fertilis* var. *hypostictica* (Elix) Elix, *Australas. Lichenol.* 66: 46 (2010)**

*Rinodinella halophila* var. *hypostictica* Elix, *Australas. Lichenol.* 65: 14 (2009). T: Tuross Heads, N.S.W., 36°04'S, 150°08'E, 1 m, on rocks along the foreshore, 24 Apr. 1976, *J.A. Elix 2086*; holo: CANB.

*Chemistry*: Thallus K+ weak yellow then pale red, C–, P–; containing hypostictic acid (major), hyposalazinic acid (minor or trace).

Endemic to coastal N.S.W.

N.S.W.: Broken Head Beach, Cocked Hat Rock, c. 5 km S of Byron Bay, *H.T. Lumbsch 11017a & A. Dickhäuser* (CANB).