



AUSTROLECIA^{1 2}

Gintaras Kantvilas³

Austrolecia Hertel, *Beih. Nova Hedwigia* 79: 452 (1984).

Type: *A. antarctica* Hertel

Thallus crustose, with a cortex of short-celled prosoplectenchymatous hyphae; prothallus black, effuse, evident at the thallus margins and between the areoles. Photobiont a unicellular green alga with \pm globose cells 8–20 μm wide. Ascomata apothecia, lecideine, broadly adnate. Disc plane to undulate, black, glossy, often cracked, epruinose. Proper exciple thin, becoming indistinct or \pm excluded with age, concolorous with the disc, in section cupulate, opaque greenish black, composed of conglutinated, compact short-celled hyphae 3–5 μm thick. Paraphyses robust, strongly conglutinated, simple or very sparingly bifurcate or anastomosed; apices mostly not swollen, occasionally with an external, pigmented cap. Asci clavate, 8-spored, of the *Catillaria*-type: tholus well-developed, uniformly intensely amyloid, lacking a *masse axiale* and ocular chamber. Ascospores 0–1-septate, hyaline, ellipsoid, non-halonate, thin-walled. Conidiomata pycnidia, immersed. Conidia cylindrical. Chemistry: norstictic acid.

A monotypic genus, occurring in cold or montane areas of the Southern Hemisphere. It is readily distinguished from the many other, superficially similar, saxicolous lecideoid genera by the black, very thinly marginate, adnate apothecia, the *Catillaria*-type asci and simple to 1-septate ascospores. *Catillaria* differs by having paraphyses with abruptly swollen, capitate, pigmented apices.

Key references: Hertel (1984); Rambold (1989).

1 *Austrolecia antarctica* Hertel

Beih. Nova Hedwigia 79: 453 (1984).

Thallus areolate to rather bullate, forming irregular patches to c. 50 mm wide; areoles 0.5–3 mm wide, mostly 0.3–2 mm thick, white-grey to cream-white, with the surface smooth or, more commonly, minutely scabrid; medulla l-. Apothecia 0.4–2 mm wide, roundish to irregularly rhomboid, sometimes nestled deeply between the areoles; proper exciple in section 25–40 μm thick. Hypothecium purple-brown, 60–160 μm thick. Hymenium 60–80 μm thick, not interspersed, \pm hyaline in the lower part, overlain by an opaque, greenish black, N+ crimson epithelial layer 10–20 μm thick; paraphyses 2–4 μm thick; asci 45–65 \times 12–15 μm . Ascospores (10–)11–13.3–16(–19) \times 4.5–5.5–7 μm . Conidia 5–6 \times 1–1.5 μm .

Chemistry: norstictic and connorstictic acids, rarely also with atranorin; cortex K+ yellow \rightarrow red, KC–, C–, P+ orange; with the addition of K, microscope sections of the thallus and apothecia yield red, needle-like crystals.

Widely scattered on dolerite rock outcrops, mainly on high mountains, but also found occasionally on lower tors in eastern Tasmania; also recorded from the Antarctic Peninsula and nearby islands, as well as from

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

mainland Australia. This very distinctive species is easily recognised by its thick, whitish, rather bullate areoles and glossy, black, adnate apothecia. However, it has several look-alikes (some unidentified) that occur in identical habitats, and unequivocal identification requires checking the thallus chemistry and ascus type.

The Knuckle, 41°36'S 147°44'E, 1400 m, 1996, *G. Kantvilas 4/96* (HO); Maria Island, summit of Bishop and Clerk, 42°35'S 148°07'E, 585 m, 2009, *G. Kantvilas 78/09* (HO); Hartz Mountains, saddle between Arthur Tarn and Emily Tarn, 43°15'S 146°46'E, 1090 m, 2016, *G. Kantvilas 2/16* (HO).

REFERENCES

- Hertel H (1984) Über saxicole, lecideoide Flechten der Subantarktis. *Beiheft zur Nova Hedwigia* **79** 399–499.
 Rambold G (1989) A monograph of the saxicolous lecideoid lichens of Australia (excl. Tasmania). *Bibliotheca Lichenologica* **34** 1–345.

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