



CRESPONEA ¹

Gintaras Kantvilas ²

Cresponea Egea & Torrente, *Mycotaxon* 48: 302 (1993).

Type: *C. premnea* (Ach.) Egea & Torrente

Thallus crustose, ecorticate, lacking a prothallus. Photobiont trentepohlioid, with cells subglobose to oblong-ellipsoid, 7–15 × 6–13 µm. Ascomata apothecia, roundish, lecideine, basally constricted. Disc epruinose or with a usually greenish, orange or reddish pruina. Proper exciple well developed, persistent, in section cupulate, opaque dark brown, K⁺ greenish, composed of amorphous, cellular hyphae. Hypothecium hyaline to pale yellowish, sometimes inspersed. Hymenium hyaline, not inspersed, hemiamyloid, KI⁺ pale blue, overlain by a dark yellow-brown, K⁺ olive-yellow epithelial layer. Asci cylindrical, 8-spored, of the *abietina*-type: walls and tholus non-amyloid apart from a very thin outer cap at the apex, and faintly amyloid “shoulders” around a short, blunt ocular chamber. Paraphysoids simple to sparsely branched; apices usually expanded. Ascospores transversely septate, straight or a little curved, hyaline, fusiform, non-halonate; locules cylindrical, rounded or rhomboid. Conidiomata pycnidia, immersed. Conidia bacilliform to fusiform. Chemistry: mostly lacking substances identifiable by TLC.

A genus of c. 20, chiefly corticolous species, found mostly in tropical and subtropical latitudes, although a few species are known from temperate areas. *Cresponea* is superficially similar to *Lecanactis*, with both genera having lecideine apothecia, *abietina*-type asci and fusiform, hyaline, transversely septate ascospores. However, *Lecanactis* differs chemically and has persistently greyish- or pale yellowish-pruinose apothecia and thin-walled spores. Despite their similarities, molecular data (Ertz *et al.* 2015) indicate that the two genera are only distantly related.

Key references: Egea & Torrente (1993); Kantvilas & Vězda (1992) Kantvilas (2004, 2020); Ertz *et al.* (2015).

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| 1 | Thallus saxicolous, ± inapparent; apothecia with a thick, radially fissured margin | 1 <i>C. graemeannae</i> |
| | Thallus corticolous, usually thin, scurfy and olivaceous grey-green; apothecial margin entire | 2 <i>C. subpremnea</i> |

1 *Cresponea graemeannae* Kantvilas

Lichenologist 52: 281 (2020). Type: Tasmania, Spring Bay Mill, “*Cresponea* Cliffs”, 42°33'S 147°56'E, 15 m, in sheltered crevices on sandstone boulders in *Allocasuarina*-dominated coastal woodland, 21 November 2019, G. Kantvilas 316/99 (holo—HO!; iso—CANB!, SI!).

Thallus ± absent, or very thin, patchy and effuse, barely discernible as a greenish or somewhat pinkish green discoloration of the substratum, forming extensive, diffuse patches to 30 cm wide. Apothecia 0.7–2 mm wide, markedly basally constricted to sometimes almost substipitate; disc brown-black to black, thinly pale greyish-pruinose, concave only when very young, becoming plane to a little convex and epruinose; exciple prominent and persistent, inrolled and markedly radially split, especially in younger apothecia, in section 90–150 µm thick laterally. Hypothecium 30–50 µm thick, inspersed with oil droplets. Hymenium 80–110 µm;

- 1 This work can be cited as: Kantvilas G (2023). *Cresponea*, version 2023:1. In MF de Salas (Ed.) *Flora of Tasmania Online*. 3 pp. (Tasmanian Herbarium, Tasmanian Museum and Art Gallery: Hobart). <https://flora.tmag.tas.gov.au/lichen-genera/cresponea/> (accessed 28 October 2022).
- 2 Tasmanian Herbarium, Tasmanian Museum & Art Gallery, PO Box 5058, UTAS LPO, Sandy Bay, TAS 7005, Australia.

paraphysoids 1.5–2 µm thick, internally olive-brown in the uppermost part, with apices expanded to 2.5–5 µm wide and with a distinct external cap; asci 70–90 × 14–20 µm. Ascospores 5–9-septate, (25–)25.5–32.5–39(–40) × 6–6.9–8 µm; wall to c. 2 µm thick. Pycnidia superficial, black, 0.1–0.3 mm wide; conidia (microconidia) 4–6 × 1–1.2 µm.

Chemistry: nil.

Endemic to Tasmania, and known from several localities on the East Coast where it grows in sheltered overhangs and clefts of large boulders in sclerophyll woodland. It is one of only three saxicolous species in the genus (the others do not occur in Tasmania), and is readily distinguished by the apothecia having a thick, inrolled, radially fissured margin.

South Sister, 41°32'S 148°10'E, 750 m, 2004, G. Kantvilas 425/04 (HO); Mt Forestier, 42°55'S 147°51'E, 315 m, 2020, G. Kantvilas 87/20 (HO).

2 *Cresponea subpremnea* (Kantvilas & Vězda) Kantvilas

Lichenologist 52: 282 (2020); —*Lecanactis subpremnea* Kantvilas & Vězda, *Telopea* 4: 688 (1992). Type: Tasmania, Corinna Road, c. 6 km W of Waratah, on old trunk of *Nothofagus cunninghamii* in rainforest, 600 m, 9 February 1982, G. Kantvilas 71/82 (holo—HO!; iso—GZU!, PRA-V!, WELT!).

Thallus effuse, scurfy, dull olivaceous grey-green, very thin and sometimes patchy to absent, or forming extensive, diffuse patches 10–30 cm wide. Apothecia to 1.7 mm wide; disc brown-black to black, plane to concave, sometimes eroded when old, rarely with a very thin, cobweb-like, pale yellowish grey pruina when very young, soon epruinose; exciple prominent and persistent, entire, in section 80–120 µm thick laterally. Hypothecium 60–110 µm thick, not interspersed. Hymenium 90–130 µm thick; asci (65–)80–100 × (13–)16–18 µm; paraphysoids 1.2–1.5 µm thick, with apices usually expanded to 2.5–5 µm wide, hyaline or internally pigmented olive-brown. Ascospores (30–)31–44.3–54(–58) × (4.5–)5–5.4–6.5(–7) µm, 6–11-septate; wall to c. 1.5 µm thick. Pycnidia uncommon, immersed, visible as minute black specks; conidia (microconidia) 3.5–5.5 × 0.8–1.2 µm.

Chemistry: nil.

Known from rainforest in western Tasmania and Victoria, where it occupies a narrow, specialised ecological niche on dry, sheltered, shaded, flaky bark of the oldest, largest trees (typically *Nothofagus cunninghamii*). Tree ferns (*Dicksonia*), whose fibrous trunks can provide a similarly dry microhabitat, are also sometimes colonised. The differences between this species and *C. plurilocularis* (Nyl.) Egea & Torrente, which occurs in the warm temperate rainforests of mainland Australia and beyond, are subtle, but the latter differs chiefly by having wider and shorter ascospores, generally with fewer septations, and a frequently pruinose apothecial disc.

Near Delville Saddle, 41°43'S 145°00'E, 140 m, 1982, G. Kantvilas s.n. (HO); Anthony Road, 41°49'S 145°38'E, 450 m, 1991, G. Kantvilas 215/91 (HO, LSU, PRA-V); Savage River Pipeline Road near Rapid River, 41°16'S 145°20'E, 450 m, 2015, G. Kantvilas 202/15 (HO).

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