Flora of Tasmania online

KNIGHTIELLA [1]

Gintaras Kantvilas [2]

Knightiella Müll.Arg., *Flora* 69: 255 (1886).

Type: *K. leucocarpa* Müll.Arg. [= *K. splachnirima* (Hook.f. & Taylor) Gyeln.]

Thallus squamulose to foliose and lobate, pale greyish green when fresh, eventually drying to a pale beige-grey, forming extensive, often discontinuous colonies tens of cms wide; lobes typically imbricate, (0.5–)1–5 mm wide, 150–750 µm thick, plane to undulate or concave, with margins rounded, ascending or recurved, sometimes a little thickened, very rarely marginally sorediate or lobulate; upper surface with a thin cortex of parenchymatous hyphae 6–14 µm wide; lower surface white, arachnoid, ecorticate. Photobiont chloro-coccoid, with cells irregularly roundish or rhomboid, 6–8 × 3–6 µm, in subglobose clusters. Ascomata apothecia, biatorine, 1–4.5 mm wide, solitary or grouped, strongly basally constricted to ± substipitate. Proper exciple pale greyish pink, ± concolorous with the disc or a little paler, entire to deeply lobate-flexuose, persistent, in section cupulate, 70–150(–200) µm thick, composed of entangled, radiating, branched and anastomosed hyphae 2–5 µm thick. Disc pink to greyish pink to pale brown, sometimes thinly whitish-pruinose, plane to undulate, smooth at first, becoming verruculose with age. Hypothecium hyaline, composed of very loosely interwoven hyphae. Hymenium hyaline, I+ pale blue, KI+ pale blue. Paraphyses 1.5–2 µm thick, branched, anastomosed and entangled; apices sometimes slightly knob-like, to 3 µm wide. Asci 8-spored, 95–150 × 9–12 µm, of the *Icmadophila*-type: elongate-cylindrical with an extended basal "tail"; outer wall thin and intensely amyloid at the apex; tholus well-developed, weakly amyloid in the uppermost part; and ascoplasm with a rounded, truncate or concave apex. Ascospores hyaline, 0–1-septate, ellipsoid, thin-walled, non-halonate, highly vacuolate when young, 14–*17.5*–20(–23) × 5–*5.9*–7(–8) µm. Conidiomata unknown. Chemistry: thamnolic acid (major); thallus and apothecial sections strongly K+ yellow.

A monotypic genus comprising the species cited below. Although one of the most distinctive and easily recognised Tasmanian macrolichens, this species has had a complex taxonomic history, most recently being classified in the Northern Hemisphere genus *Icmadophila*. However, its unique status has been confirmed by DNA sequence data, most recently by Ludwig *et al.* (2000).

Key references: Galloway & Elix (1980); Galloway (2000); Ludwig *et al.* (2020).

1 Knightiella splachnirima (Hook.f. & Taylor) Gyeln.

Repert. Spec. Nov. Regni Veg. 29: 1 (1931); —*Parmelia splachnirima* Hook.f. & Taylor, *London J. Bot.* 3: 645 (1844); *Lobaria splachnirima* (Hook.f. & Taylor) Zahlbr., *Cat. Lich. Univ.* 3: 292 (1925); *Thelidea splachnirima* (Hook.f. & Taylor) P.James, *in* W. Martin, *Trans. Roy. Soc. New Zealand* 3: 205 (1968) (*nom. inval.*); *Physcia splachnirima* (Hook.f. & Taylor) Yoshim., *J. Hattori Bot. Lab.* 34: 253 (1971); *Icmadophila splachnirima* (Hook.f. & Taylor) D.J.Galloway, *Lichenologist* 32: 295 (2000). Type: [Tasmania] Van Diemens Land, *R.C. Gunn* (lecto, *fide* Galloway & Elix 1980—FH; isolecto—BM!).

1 This work can be cited as: Kantvilas G (2023). *Knightiella*, **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/knightiella/**

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Knightiella squamarioides (Nyl.) Müll.Arg., *Flora* 71: 202 (1888); —*Baeomyces squamarioides* Nyl., *Syn. Meth. Lich*. 1: 184 (1860). Type: Tasmania, supra terram inter Jungermannias minores, *C. Stuart* (lecto, *fide* Galloway & Elix 1980, —H-NYL 40234!; isolecto—BM!).

Thelidea corrugata Hue, *Bull. Soc. Bot. France* 48: LXI (1902).

Widespread in high rainfall areas where it grows on peat, soil or rotting plant material in open, moist situations. The peaty margins of roads and tracks in wet forest, buttongrass moorland and scrub are a typical habitat. It also occurs in Victoria, New Zealand and the subantarctic islands. Soredia are very rare in Tasmanian populations and are not considered to be taxonomically significant.

Margate, 43°02'S 147°15'E, 1911, *L. Rodway* (HO); Raminea Plains, 80 m, 1984, *G. Kantvilas 585/84* (distributed as *A. Vězda: Lich. Sel. Exsicc.*: 2021) (HO); Lake Cygnus, 43°08'S 146°14'E, 880 m, 2006, *G. Kantvilas 495/06* (HO); c. 1.5 km NE of Mt Pillinger, 41°48'S 146°08'E, 1000 m, 2015, *G. Kantvilas* 3/15 (HO) [sorediate].

REFERENCES

Galloway DJ, Elix JA (1980) *Knightiella* Müll.Arg., a monotypic lichen genus from Australasia. *New Zealand Journal of Botany* **18** 481–486.

Galloway DJ (2000) *Knightiella* belongs in *Icmadophila* (Helotiales: Icmadophilaceae). *Lichenologist* **32** 294–297.

Ludwig LR, Kantvilas G, Nilsen AR, Orlovich DA, Summerfield TC, Wilk K, Lord JM (2020) A molecular-genetic reassessment of the circumscription of the lichen genus *Icmadophila*. *Lichenologist* **52** 213–220.

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