Flora of Tasmania online

KNIGHTIELLASTRUM [1] [2]

Gintaras Kantvilas [3]

Knightiellastrum L.Ludw. & Kantvilas, *in* L. Ludwig *et al., Lichenologist* 52: 217 (2020).

Type: *K. eucalypti* (Kantvilas) L.Ludw. & Kantvilas

Thallus squamulose, whitish to pale grey, forming extensive, irregular colonies to 50 cm wide; squamules arising from an effuse, very thin and transient, white primary thallus, 1–3.5(–5) mm wide, unevenly 130–350 µm thick, sorediate, scattered or imbricate, stellate, rosette-like or, more typically, flabellate and with one side firmly attached to the substratum and the other ascending, initially with crenulate, rather thickened margins, soon becoming nodulose, lobulate or palmately lobed, in section with a pseudocortex 20–30 µm thick, comprised of randomly orientated, short-celled hyphae 3–5 µm wide, interspersed with occasional dead algal cells; soredia coarsely granular, concolorous with the thallus, arising from the lower surface of the margins and then spreading across the upper surface; lower surface white, ecorticate, erhizinate. Photobiont a unicellular green alga with globose cells 5–11 µm diam. Ascomata and conidiomata unknown. Chemistry: thamnolic acid; thallus strongly K+ yellow.

A monotypic genus comprising the species cited below. In the absence of reproductive structures, it was previously classified in various genera of the Icmadophilaceae on the basis of morphologial, anatomical, chemical and ecological evidence, before its unique status was confirmed by DNA sequence data. Morphologically it is most similar to *Siphula* and *Knightiella*, and the Northern Hemisphere's *Icmadophila*, all of which also contain thamnolic acid.

Key references: Lumbsch *et al.* (2011); Kantvilas (2018); Ludwig *et al.* (2020).

1 Knightiellastrum eucalypti (Kantvilas) L.Ludw. & Kantvilas

In L. Ludwig *et al., Lichenologist* 52: 217 (2020); —*Icmadophila eucalypti* Kantvilas, *in* H.T. Lumbsch *et al., Phytotaxa* 18: 72 (2001; *Knightiella eucalypti* (Kantvilas) Kantvilas, *Herzogia* 31: 567 (2018). Type: Tasmania, Hartz Road near the entrance to the National Park, 43°12'S 146°47'E, 570 m, on moist trunk of old *Eucalyptus obliqua* in mixed forest, 25 July 2007, *G. Kantvilas 285/07* (holo—HO!; iso—BM!).

Endemic to Tasmania and widespread in old growth wet sclerophyll forest and rainforest from lowland to subalpine elevations. It occurs on the lower parts of trunks of very large trees with a thick, fibrous bark, such as *Eucalyptus obliqua* and *Athrotaxis selaginoides*. The crenulate, thickened lobe margins easily distinguish it from the chemically identical *Cladonia rigida* and *Siphula decumbens* which can occur in the same habitats; all three species react K+ yellow. Some thalli have pinkish, convex, gall-like structures that resemble incipient apothecia or infections by parastitic fungi, but these appear to be neither and consist of undifferentiated hyphae only.

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

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Weindorfers Forest, 41°38'S, 145°56'E, 1988, *G. Kantvilas s.n.* (HO); Mueller Road, 42°49'S 146°28'E, 550 m, 1998, *G. Kantvilas 11/98* (HO); track to Wylds Craig, 42°30'S 146°26'E, 650 m, 2003, *G. Kantvilas 616/03* (HO).

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