Flora of Tasmania online

SIPHULELLA [1]

Gintaras Kantvilas [2]

Siphulella Kantvilas, Elix & P.James, *Bryologist* 95: 186 (1992).

Type: *S. coralloidea* Kantvilas, Elix & P.James

Thallus dimorphic, consisting of a basal crustose thallus from which arise fruticose podetia; photobiont chlorococcoid, with cells ± globose, 7–17 µm wide. Basal thallus pale to bright yellow or yellowish green, glossy, ecorticate, unevenly lumpy, soon disappearing. Podetia whitish grey, commonly with a faint bluish tinge when fresh, 3.5–10(–15) mm long, 0.2–0.8 mm thick, terete, subterete or occasionally a little flattened, typically pendent or decumbent, more rarely erect or ascending, simple or dichotomously divided up to c. 4 times, straight or twisted and entangled, corticate, forming spreading swards potentially several metres across; surface matt, unevenly pitted and undulate, mostly areolate and scabrid; cortex 10–20(–40) µm thick when well developed, composed of thick-walled, periclinal hyphae 4.5–7.5 µm thick. Ascomata apothecia, biatorine, globose, immarginate, 1–3.5 mm wide, terminal and carried above the mass of the thallus at the tips of somewhat stouter podetia, 0.5–1 mm thick, furrowed and ecorticate in the upper part. Proper exciple whitish, very soon reflexed and excluded, in section cupulate, composed of entangled, branched and anastomosed hyphae inspersed with crystals that dissolve in K. Disc bright pink to orange-pink when fresh, collapsing somewhat and becoming wrinkled, scabrid and mottled grey to greyish pink when dry. Hypothecium hyaline, composed of very loosely interwoven hyphae. Hymenium hyaline, weakly I+ pale blue, KI+ pale blue, inspersed with occasional oil droplets. Paraphyses 0.8–1 µm thick, simple or sparingly branched, entangled; apices tapered or expanded to 3 µm wide. Asci 8-spored, 95–130 × 7–12 µm, of the *Icmadophila*-type: narrowly elongate-cylindrical with an extended "tail"; outer wall thin and amyloid, especially towards the apex; tholus well developed, weakly amyloid except in the uppermost part; ocular chamber very narrow and soon disappearing, and the ascoplasm with a rounded or truncate apex. Ascospores hyaline, simple, narrowly ellipsoid, thin-walled, non-halonate, highly vacuolate, (9–)10–*14.1*–19 × (3.5–)4–*5.3*–7 µm. Conidiomata unknown. Chemistry: siphulellic acid; thallus K–, KC–, C–, P+ yellow.

A monotypic genus comprising the species cited below. Although intially classified in the Baeomycetaceae, *Siphulella* was transferred to the Icmadophilaceae by Rambold *et al.* (1993) on the strength of anatomical characters, a position subsequently confirmed by molecular data (Ludwig *et al.* 2020). The dominant chemical compound, siphulellic acid, is not known from any other organism.

Key references: Kantvilas *et al.* (1992); Rambold *et al.* (1993); Ludwig *et al.* (2020).

1 Siphulella coralloidea Kantvilas, Elix & P.James

Bryologist 95: 186 (1992). Type: Tasmania, Rasselas Track, 2 km NW of Florentine Bridge, 42°42'S 146°23'E, 440 m, on gravelly soil and peat at edge of buttongrass moorland, 4 October 1986, *G. Kantvilas 165/86 & J. Jarman* (holo—HO!; iso—BM!, CANB!).

Endemic to Tasmania and restricted to the south-west, to areas with a geology of Precambrian metamorphosed sendiments or Ordovician conglomerate. It ranges from lowland to alpine elevations in buttongrass

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

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moorland, wet heathland, scrub and alpine microshrubbery. *Siphulella* is a consolidator of soil and occurs on steeply sloping banks of coarse sand, gravel or small stones. Natural habitats include cuttings made by small streams, or soil banks around large boulders. However, it has proved to be an extremely successful coloniser of man-made, disturbed habitats. When this species was first described, fertile populations appeared to be exceedingly rare, but extensive patches of incipient *Siphulella* thalli, visible as large circles of the yellowish basal thallus, were observed developing in road-cuttings. Several decades on, these are now extensive mats of fruticose podetia with abundant, globose, pinkish fruiting bodies.

Cracroft Track, 43°08'S 146°27'E, 360 m, 1965, *G.C. Bratt 2707 & J.A. Cashin* (HO); Mt McCall, 42°22'S 145°43'E, 720 m, 1984, *G. Kantvilas 214/84 & P. James* (BM, HO, K); Gordon Road, *c.* 2 km S of Needles Picnic Area, 42°46'S 146°24'E, 450 m, 2007, *G. Kantvilas 286/07 & B. de Villiers* (HO, K).

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