



NEPHROMOPSIS ¹

Gintaras Kantvilas ²

Nephromopsis Müll.Arg., *Flora* 74: 374 (1891).

Tuckermannopsis Gyeln., *Acta Faun. Fl. Univers.*, Ser. 2, Bot. 1 (5-6): 6 (1933); type: *Tuckermannopsis ciliaris* (Ach.) Gyeln.

Type: *N. stracheyi* (C.Bab.) Müll.Arg.

Thallus foliose or fruticose, yellowish, olive-green to brown, with lobes plane, canaliculate or subtubular, dorsiventral, pseudocyphellate; pseudocyphellae white, on either surface or marginal. Photobiont treboux-oid. Ascomata apothecia, lecanorine; proper exciple cupulate. Asci 8-spored, of the *Cetraria*-type: narrowly clavate, with a well-developed, amyloid tholus, pierced entirely by a narrow, non-amyloid *masse axiale* with parallel flanks and an intensely amyloid ring; ocular chamber conical, with a narrow beak. Paraphyses rather stout, straight, sparsely branched; apices not enlarged. Ascospores simple, hyaline, broadly ellipsoid to subglobose. Conidiomata pycnidia; conidia dumb-bell-shaped or bacilliform. Chemistry: the genus has a diverse chemistry that can include usnic acid or fatty acids.

Nephromopsis belongs to the cetrarioid lichens, a conspicuous group in boreal and cool temperate environments in the Northern Hemisphere, where it is represented by numerous genera and species. Cetrarioid lichens are very poorly represented in Tasmania, where only *Cetraria* (three species) and *Nephromopsis* occur. As a result of recent molecular research (Divakar *et al.* 2017), *Nephromopsis* has subsumed several cetrarioid lichen genera, including *Tuckermannopsis* Gyelnik, and now comprises more than 60 species. The genus has centres of diversity in western North America and eastern Asia. Only one species occurs in Australia.

Key references: Kantvilas *et al.* (2002); Ahti & Thell (2011); Divakar *et al.* (2017).

1 *Nephromopsis chlorophylla* (Willd.) Divakar, Crespo & Lumbsch

Fungal Diversity 84: 112 (2017); —*Lichen chlorophyllus* Willd., in F.W.A. von Humboldt, *Fl. Friberg. Spec.*: 20 (1872); *Cetraria chlorophylla* (Willd.) Poetsch, *Medd. Soc. Fauna Fl. Fenn.* 6: 121 (1872); *Tuckermannopsis chlorophylla* (Willd.) Hale, *Bryologist* 90: 164 (1987).

Thallus foliose, to c. 10 cm wide, with lobes 1–5 mm wide, elongate, ascending or subpendulous, flat to slightly concave, much divided and entangled, sorediate; upper surface pale olive-brown, glossy; lower surface pale cream, fawn-brown to brown, glossy, weakly pitted and faveolate, with very sparse, concolorous rhizines; pseudocyphellae very sparse, mostly marginal; soralia white, mostly marginal but occasionally also laminal, coarse, sometimes becoming pseudoisidiate. Apothecia unknown in Tasmania.

Chemistry: protolichensterinic acid (all spot test negative)

Uncommon in Tasmania and found mainly in highland rainforests and old wet eucalypt forests in the Great Western Tiers, on the Central Plateau and in the north-eastern highlands; also widespread in cool temperate areas of the world but not known from mainland Australia. It typically occurs as an epiphyte in the forest

1 This work can be cited as: Kantvilas G (2023). *Nephromopsis*, 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/nephromopsis/>

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

canopy or on understorey shrubs in forest gaps, but rarely also colonises rocks at forest margins. When fresh and moist, the thallus can be bright lettuce-green, and resemble that of the common *Pseudocyphellaria multifida*.

Lake Road, 3–5 km from Cynthia Bay, 42°07'S 146°12'E, 1972, G.C. Bratt 72/977 & J.A. Cashin (AD, HO, MEL); Quamby Bluff, 41°39'S 146°42'E, 600 m, 1980, G. Kantvilas 137/80 (BM, HO, LSU); Little Fisher River, 41°45'S 146°20'E, 820 m, 1982, G. Kantvilas 116/82 (HO).

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INDEX

C		
<i>Cetraria</i>	1	<i>Nephromopsis chlorophylla</i>
<i>Cetraria chlorophylla</i>	1	<i>Nephromopsis stracheyi</i>
L		<i>Nephromopsis</i>
<i>Lichen chlorophyllus</i>	1	P
N		<i>Pseudocyphellaria multifida</i>
<i>Nephromopsis</i>	1	T
		<i>Tuckermannopsis</i>
		<i>Tuckermannopsis chlorophylla</i>
		1