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Coccotrema corallinum Messuti and C. pocillarium (C.E.Cumm.) Brodo

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Abstract: Coccotrema corallinum and C. pocillarium are reported as new to the New Zealand mycobiota from collections made by Henry Imshaug on the Auckland Islands in 1972. Both species are also new to Australasia, C. corallinum being known previously from only southern South America, and C. pocillarium from only southern South America and the Pacific Northwest of North America.

Introduction

The genus Coccotrema Müll.Arg. was erected for the single species C. antarcticum Müll.Arg. by Müller (1888), although the following year he included his new species in the synonymy of Pertusaria cucurbitula Mont. (Müller 1889), and made the new combination C. cucurbitula (Mont.) Müll.Arg. The earliest name for this species is actually Porina granulata Hook.f. & Taylor (Hooker & Taylor 1844), but that name is illegitimate because it is a later homonym of P. granulata Ach. (Acharius 1814), a very different species. A full account of the nomenclature of the genus is given by Brodo (1973) and Messuti (1996).

More recently the genus has been expanded by the inclusion of three species transferred from Pertusaria: C. colobinum (Tuck.) Messuti from South America (Messuti 2003), C. pocillarium (C.E.Cumm.) Brodo from NW North America and southern South America, and C. porinopsis (Nył.) Imshaug ex Yoshim. from southern South America, Australasia and Japan. In addition, several new species have been described: C. citrinescens P.James & Coppins from NW Europe, C. corallinum Messuti, C. fernandezianum Messuti and C. magellanicum Messuti from southern South America, and C. maritimum Brodo from NW North America. The monotypic genus Lepolichen Trevis. from southern South America has also been shown to be congeneric with Coccotrema (Schmitt et al. 2001), resulting in the new combination C. coccophorum (Mont.) I.Schmitt, Messuti & Lumbsch.

The genus is concentrated in the southern cool-temperate zone, and is especially well represented in southern South America; of the 10 currently accepted species, seven are known from southern South America. Two species of Coccotrema are currently included in the mycobiota of Australasia: C. cucurbitula and C. porinopsis (Malcolm & Galloway 1997). However, investigation of the extensive collections made from the Auckland Islands during the austral summer of 1972–1973 by Henry Imshaug and housed in the herbarium of Michigan State University (MSC) (Fryday & Prather 2001) has revealed the presence of two additional species of Coccotrema that are here reported for the first time from New Zealand and Australasia.

Coccotrema corallinum Messuti, Mycotaxon 82, 430 (2002).
Type: Argentina, Tierra del Fuego, Dept. Ushuaia, Bahia Buen Suceso, alpine region at the summit of mountain behind bay, 600 m, 13.ix.1971, Imshaug 49994 & Ohlsson (holotype—MSC).

Illustrations: Messuti (2002: 434, as C. corallina); Messuti & Vobis (2002: 19).

Coccotrema corallinum is a terricolous species that grows over bryophytes and is characterized by having a thallus completely covered by thick coralloid isidia (0.3–0.4 mm wide by 2–4 mm tall). The Auckland Islands collections lack ascomata, but when present these have a non-isidiate thalline margin and ascospores 48–60 x 24–30 µm. There are two other isidiate species of Coccotrema: C. magellanicum and C. porinopsis,
but in both those species the isidia are simple or branched and much finer (less than 0.2 mm wide by 1.0 mm tall), and the ascomata have an isidiate thalline margin. In addition, *C. magellanicum* occasionally has soralia. *Coccotrema porinopsis* is known from Australasia (including New Zealand) and southern South America, but *C. magellanicum* is known from only southern South America (Galloway 1985, Messuti 2002). The thallii of all three species contain stictic acid and accessory compounds.

The single collection from the Auckland Islands is from terricolous bryophytes on the summit of the Hooker Hills in the north of Auckland Island (50°32.5'S, 166°09'E).

NEW ZEALAND SPECIMEN EXAMINED

**Auckland Islands.** Auckland Island: • on summit of Hooker Hills, tussock and rock outcrops, 1972, *Imshaug* 56673 (MSC).

ADDITIONAL SPECIMENS EXAMINED (all MSC)

**Argentina.** Tierra del Fuego: • Dept. Ushuaia, Isla Grande, Bahia Buen Suceso, 54°48'S, 65°17'W, 600 m, at summit of mountain behind bay, alpine region, 1971, *Imshaug* 49983 & *Olkisson* (type); • ibid., Bahia Valentin, 54°35'S, 65°32'W, 500 m, krumholz area at summit of mountain behind bay, 1971, *Imshaug* 50288 & *Olkisson*.


Type: U.S.A., Oregon, Silcoos, 1924, F.P. *Sipe* 849 (holotype—UPS).


*Coccotrema pocillarium* is a corticolous sorediate species. Whereas most other species of the genus grow over bryophytes, *C. pocillarium* occurs on bark. Two other species of *Coccotrema* are known with soredia: the saxicolous *C. citrinescens* from NW Europe and the corticolous *C. magellanicum* from southern South America, which is primarily isidiate with only occasional soralia.

The three collections from the Auckland Islands are all from the same small area, one from southern Auckland Island, and two from the north shore of Adams Island, which is immediately south of Auckland Island and separated from it by Carnley Harbour, a narrow strait about 1 km wide.

NEW ZEALAND SPECIMENS EXAMINED


SELECTED ADDITIONAL SPECIMENS EXAMINED (all MSC)

**Argentina.** Tierra del Fuego: • Dept. Ushuaia, Strait of Magellan, [Bahia] Fortescue, 53°42'W, 72°01'W, climax forest, on *Nothofagus* betuloides, 1969, *Imshaug* 44908 & *Olkisson*; • ibid., NE side of Pto Gallant, 53°47'S, 72°00'W, thin woods, on *Drimys*, 1969, *Imshaug* 45121-B & *Olkisson*; • ibid., Isla de los Estados, Puerto Parry, E side of inner bay, 54°47'5, 64°22'W, sea level, mature *Nothofagus* forest, 1971, *Imshaug* 53967 & *Olkisson*.


**USA.** Oregon: • Lane Co., S of Cleawox Lake, in alder grove, on *Alnus rubra*, 1968, *Pike* L-514.

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References


*The holotype of *P. pocillaria* was stated to be in MO by Brodo (1973), but MO’s lichen collection was transferred to US around that time, probably while the specimen was on loan to Brodo. The specimen certainly isn’t in MO, and a recent search by Greg McKee failed to locate it in US.*