

***Chlorosplenium* in New Zealand and Australia**

Several specimens representing three species from New Zealand and Australia with more or less sessile apothecia with yellowish to pale green colours found on rotten wood, have ITS sequences that place them close to the North American *Chlorosplenium chlora* sensu Haelewaters et al. (2018) and Tanney & Seifert (2020).

Brief notes on each of these species are below.



ITS gene tree, incorporating unpublished ITS sequences from the New Zealand and Australian *Chlorosplenium* specimens into the ITS dataset of Tanney & Seifert 2020

As an aside, the colour of the *Chlorosplenium* apothecia recalls another common, unnamed wood-inhabiting New Zealand fungus "*Bisporrella green*", a species with a '*Bisporrella citrina*-like (= *Calycella citrina*) macroscopic appearance but phylogenetically distinct. "*Bisporrella green*" and *Calycella citrina* are both *Helotiaceae* sensu Johnston et al. (2019), although they are phylogenetically distant within the family, whereas *Chlorosplenium* is basal in *Mollisiaceae*. Sister to the New Zealand fungus is a macromorphologically similar Australian species on *Banksia* cones, PDD 117591.

Hyperlinks to images of "*Bisporrella green*" - https://scd.landcareresearch.co.nz/Specimen/PDD_111542;
https://scd.landcareresearch.co.nz/Specimen/PDD_112175; https://scd.landcareresearch.co.nz/Specimen/PDD_112180

Hyperlink to the Australian sister species https://scd.landcareresearch.co.nz/Specimen/PDD_117591

***Chlorosplenium* sp. 1**

Apothecia 2–5 mm diam., cupulate, sessile to short stipitate, receptacle glabrous or slightly scruffy, yellow with a greenish tinge when fresh, when dry with dirty greenish-grey receptacle; hymenium pale and dull creamy-greenish; ectal excipulum in vertical section of angular to globose cells 4–6 μm diam. with walls thin, dark brown, nongelatinous, arranged in rows at high angle to surface of receptacle; e.e. appears to be covered with poorly developed, incomplete layer of hyphae with hyaline to pale brown walls with what appears to be a gelatinous coating; m.e. loose nongelatinous *textura intricata*. Paraphyses 3 μm diam., undifferentiated to the rounded apex, about the same length as the asci. Asci 55–70 \times 5.5–6.5 μm , cylindrical to subclavate, taper slightly to rounded, thick walled apex, with well-developed J+ pore that extends right through the wall, slightly wider towards the outside, 8-spored. Ascospores 7.5–8.5 \times 2–2.5 μm , oblong-elliptic, taper slightly to both rounded ends, flat one side, not curved, 0-septate. Culture slow growing and dark.

On decorticated *Nothofagus* wood.

Known distribution: New Zealand.

Specimens: New Zealand: Bay of Plenty: vic. Ruatahuna, Tarapounamu, east side of road, on *Nothofagus* sp. dead wood, coll. P.R. Johnston (D1885) & B.C. Paulus (TTT547), 8 Oct 2004 (PDD 98717; ICMP 23734); vic. Ruatahuna, Tarapounamu, west side of road, on *Nothofagus* sp. fallen wood, coll. P.R. Johnston (D1877) & B.C. Paulus, 7 Oct 2004 (PDD 98718; ICMP 23733); Taupo: vic. Kiko Rd, Tiraki Rd, on *Nothofagus* sp. decort. wood, coll. P.R. Johnston (D1579) & S. Whitton, 3 May 2001 (PDD 99090, ICMP 23731); Nelson: Lake Rotoiti, Loop Track, on *Nothofagus* sp. dead wood. coll. P.R. Johnston (D1096), 17 May 1994 (PDD 64801, ICMP 23730).



PDD 99090, dried specimen



PDD 98718, dried specimen

***Chlorosplenium* sp. 2**

Apothecia sessile to short substipitate, receptacle thick-fleshed, slightly greenish, hymenium yellow, base of stipe dark; when dry, the surface of receptacle has a coarse, matted, hair-like appearance. Ectal excipulum of non-gelatinous *textura angularis*, walls dark toward margin, paler towards inside, covered with a layer of appressed, loose, hair-like hyphae. Paraphyses 2.5 μm diam., undifferentiated to the rounded apex, about same length as asci. Asci 60 \times 5.5–6 μm , subcylindrical to subfusoid, tapering gradually to subtruncate apex, wall thick at apex with well developed J+ pore extending right through wall, 8-spored. Ascospores about 7 \times 2 μm , allantoid, hyaline.

On fallen *Metrosideros* wood.

Known distribution: New Zealand.

Specimens: New Zealand: Stewart Island: Pryse Peak Track, on *Metrosideros umbellata* fallen wood, coll. P.R. Johnston (D1683), R. Leschen & S.R. Whitton, 26 Apr 2002 (PDD 93100, ICMP 23732).

***Chlorosplenium* sp. 3**

Apothecia sessile to substipitate, up to 4 mm diam., often in gregarious groups, receptacle pale greenish grey to pale mustard yellow, sometimes covered with scurfy, tangled, hair-like elements, hymenium greyish.

On fallen *Nothofagus* wood.

Known distribution: Australia — Tasmania and New South Wales.

Specimens: Australia: Tasmania: Mt Field National Park, Lyrebird Nature Walk, on bark of fallen *Nothofagus cunninghamii* wood, coll. P.R. Johnston (AU97-44), 6 Oct 1997 (HO xxxxx; PDD 117588; ICMP 23737); New South Wales: Barrington Tops National Park, Gloucester Tops, Antarctic Beech Walk, on decort. *Nothofagus moorei* wood, coll. P.R. Johnston (AU09-10), 16 May 2009 (DAR xxxxx; PDD 117590, ICMP 23735); Barrington Tops National Park, Gloucester Tops, Antarctic Beech Walk, long loop, on decort. *Nothofagus moorei* wood, coll. P.R. Johnston (AU09-48), 17 May 2009 (DAR xxxxx; PDD 117589, ICMP 23736).



AU09-10, fresh specimen



AU09-48, fresh specimen

References

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