

## ***Chlorovibrissea* sensu Sandoval-Leiva et al. 2014 is polyphyletic**

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*Chlorovibrissea* was described by Kohn (1989) for several Australasian species that had previously been placed in *Vibrissea*. *Chlorovibrissea* differed from *Vibrissea* in having apothecia with green pigmentation and a different arrangement to the amyloid ring in the ascus apex. Later phylogenetic studies supported these differences, the two genera phylogenetically distant within *Helotiales* (e.g. Sandoval-Leiva et al. 2014).

Sandoval-Leiva et al. (2014) described a new species *Chlorovibrissea chilensis* and transferred another Australasian species *C. albofusca* from *Vibrissea*. They presented a phylogeny that showed a clade containing *C. chilensis* and *C. albofusca* was strongly supported as sister to a clade containing three other *Chlorovibrissea* species, including the type of the genus, *C. bicolor*. All of these species share a vibrisseaceous macromorphology with long-stalked, capitate apothecia, although the apothecia of *C. albofusca* and *C. chilensis* are noticeably paler and more fleshy than the original species.

Recently available sequences from species with a more typical helotiaceous macromorphology, with cupulate, short-stipitate apothecia, suggest *Chlorovibrissea* sensu Sandoval-Leiva et al. (2014) may be polyphyletic (ITS phylogeny below). These include sequences from *Aeruginoscyphus sericeus*, *Chlorovibrissea korfii* and from three unnamed species from New Zealand.

Only ITS sequences are available for most of the specimens within the *Chlorovibrissea* clade and the phylogenetic relationships between the species in this clade with cupulate apothecia are not strongly resolved. Morphologically they are highly divergent. Apart from *C. korfii*, all have well developed and conspicuous hairs. Most have small, elliptic ascospores, except for *A. sericeus* with long-cylindric ascospores and *C. korfii* with filiform ascospores. The unnamed species PDD 70096 ([https://scd.landcareresearch.co.nz/Specimen/PDD\\_70096](https://scd.landcareresearch.co.nz/Specimen/PDD_70096)) has spores with finely ornamented walls, a feature very unusual for *Helotiales*. The two unnamed species from New Zealand found on decomposing leaves of *Nothofagus* (e.g. [https://scd.landcareresearch.co.nz/Specimen/PDD\\_61837](https://scd.landcareresearch.co.nz/Specimen/PDD_61837)) and *Phormium* ([https://scd.landcareresearch.co.nz/Specimen/PDD\\_119504](https://scd.landcareresearch.co.nz/Specimen/PDD_119504)) respectively, conspicuously have hair-like elements across the hymenium, which appears very dark as a consequence.

Note that the DNA sequence from *Aeruginoscyphus sericeus* is accessioned into GenBank as *Erinella aeruginosa*, a synonym of *A. sericeus* according to Dougoud (2012).

Dougoud R 2012. *Aeruginoscyphus*, un nouveau genre pour *Peziza sericea* (Helotiales, Hyaloscyphaceae). *Ascomycete.org* 4 (1): 1-4.

Kohn LM 1989. *Chlorovibrissea* (Helotiales, Leotiaceae), a new genus of Austral Discomycetes. *Memoirs of the New York Botanical Garden* 49: 112-118.

Sandoval-Leiva P, Carmarán CC, Park D, Romero AI, Johnston PR 2014. Vibrisseaceous fungi from the southern hemisphere, including *Chlorovibrissea chilensis* (Helotiales, incertae sedis) sp. nov. *Mycologia* 106: 1159-1067.

**Phylogeny based on ITS sequences, FastTree analysis from Geneious**

