



A new species of endophytic *Coprinopsis* from subtropical rainforest in south-east Queensland.

Brooke Raphael (School of Agriculture and Environmental Science, University of Southern Queensland); Eliza J. Whiteside (University of Southern Queensland); Mark Lynch (University of Southern Queensland); John Dearnaley (University of Southern Queensland).

Endophytic fungi are microbes that occur in plant tissues without enacting disease symptoms. Fungal endophytes are not well studied in Australia, and little is known of their diversity, ecology, and physiological roles in native plants. As part of a PhD project focusing on the fungal endophytes of subtropical rainforests in south-east Queensland, 180 endophytic fungi have been grown out from the leaves of 15 native plant species. Isolates were identified via morphology and sequencing of ITS-DNA. The majority of isolated endophytes were identified as ascomycetes, but a single endophyte was shown to be a basidiomycetous *Coprinopsis* sp. Phylogenetic analysis of the ITS-DNA of this isolate confirms it to be a new species that is related to *C. alnivora* and *C. gonophylla*. Given that the fungus was collected as an endophyte in its mycelial form, rather than from fruiting bodies, the novel species needs to be cultivated *in vitro* to provide morphological descriptions. Three protocols to induce fruiting of the fungus have been tested with varying results. To our knowledge, this is the first report of an endophytic *Coprinopsis* sp. in Australia and highlights the wealth of knowledge yet to be learned about this little explored ecological niche.

Brooke Raphael: brooke.raaphael@unisq.edu.au