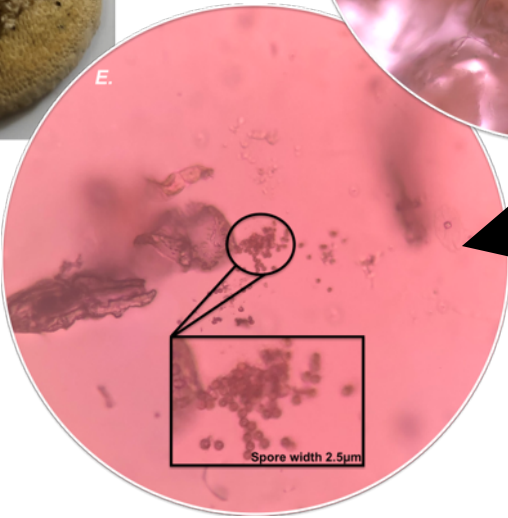
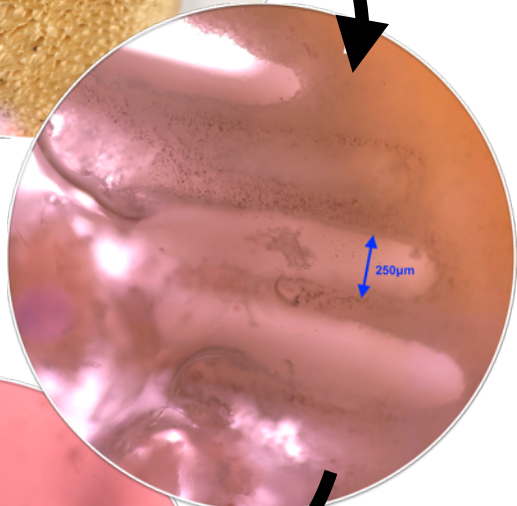
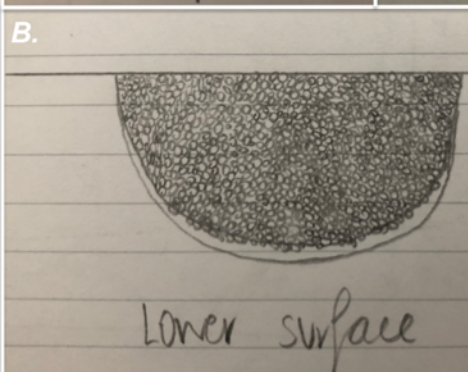
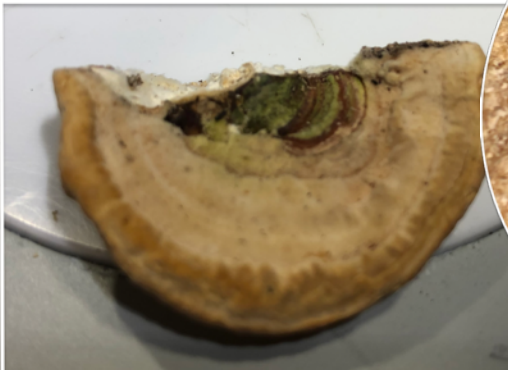
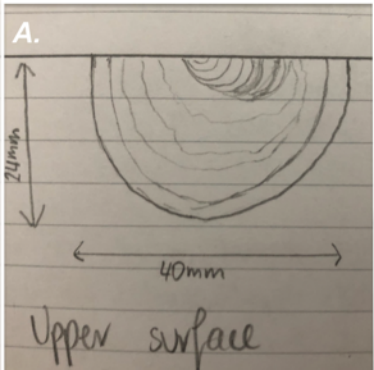


*Trametes modesta*



Photo by JiunnKo



**Figure 1.** *Trametes modesta* collected by Prof. Elizabeth Aitken and described by Kirsten Slemint. **a.** Upper surface schematic and photograph. **b.** Lower surface schematic and photograph. **c.** Lower Surface poroid with angular pores. **d.** Hymenophore **e.** Spores

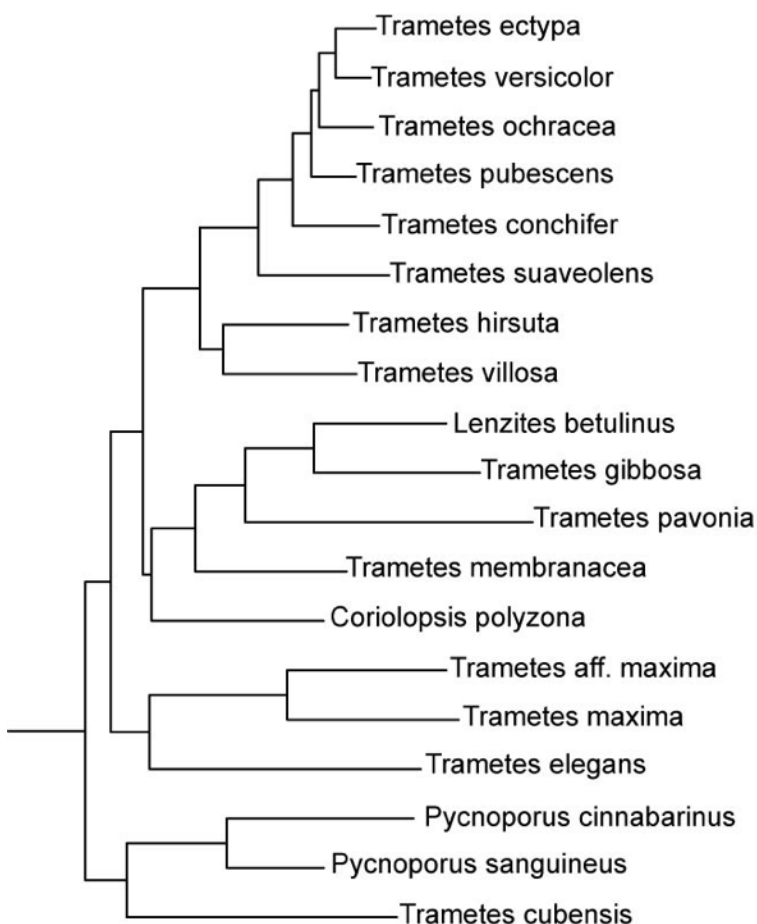
## *Trametes modesta* (Kunze ex Fr.) Ryvarden

*Etymology* - *Trametes* means 'thin'; *modesta* means 'modest' or 'orderly'.

*Classification* - Basidiomycota, Agaricomycetes, Polyporales, Polyporaceae, *Trametes*

*Basidiocarps* - pileus semi-circular or reniform; 40mm x 24mm; poroid with angular pores. *Upper Surface* - smooth or finely tomentose; concentrically zoned; pinkish brown and green in centre; cream in outer zone with darker cream on outer, most recently laid surface. *Lower Surface* - cream; poroid with angular pores; pores on outermost surface less distinct. *Pores* - very small but visible to the naked eye, 8 - 10 per mm; 250µm width; round. *Stem* - laterally attached to substrate; 1-10mm; smooth; white or cream; broader at centre attachment point. *Flesh* - flexible and tough; thin 3mm width; cream; minor colour change to a darker cream with scoring. *Spores* - reddish, globose or spherical; smooth; thin-walled; 2.5µm width. *Substrate* - many kinds of deciduous wood. *Habitat* - wet eucalypt forest.

*Consensus phylogeny* - by PolyPEET based on Justo and Hibbett 2011, excludes *Trametes modesta* and its relative, *Fomitopsis feei*.



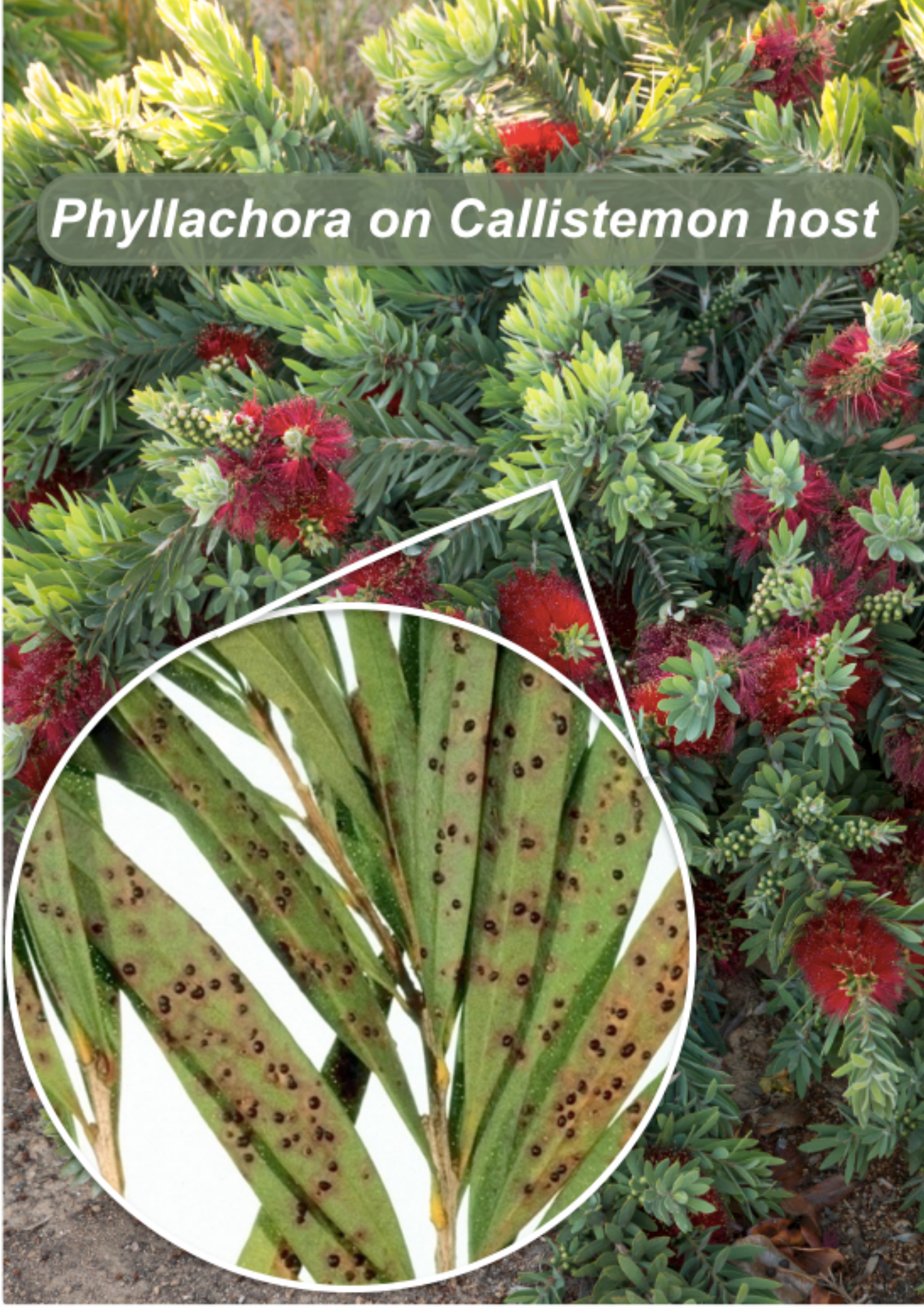
*Notes* - Evidence of damage to lower surface; spores appeared to have been caught in sticky, web like substance. Spore samples were found on this web-like substance but not evident in samples taken within Hymenophore. *Trametes modesta* is a fast growing white rot fungus which expresses high cellulase activity causing high weight loss on wood (Mswaka and Magan, 1998) and has recently been identified as highly attractive to the textile, pulp and paper industries for its high laccase activity, useful in reducing molecular oxygen to water and oxidising various aromatic substrates such as diphenols, methoxy-substituted monokhenols and aromatic amines (Nyanhongo, 2002)

*Trametes modesta* collected by Professor Elizabeth Aitken and described by Kirsten Slemint.

### References

- A. Justo & D.S. Hibbett. (2011). Phylogenetic classification of *Trametes* (Basidiomycota, Polyporales) based on a five-marker dataset. *Taxon* 60(6): 1567-158
- Mswaka, A. and Magan, N. (1998). Wood degradation, and cellulase and ligninase production, by *Trametes* and other wood-inhabiting basidiomycetes from indigenous forests of Zimbabwe. *Mycological Research*, 102(11), pp. 1399-1404.
- Nyanhongo, G. (2002). Production of laccase by a newly isolated strain of *Trametes modesta*. *Bioresource Technology*, 84(3), pp.259-263.

*Phyllachora* on *Callistemon* host

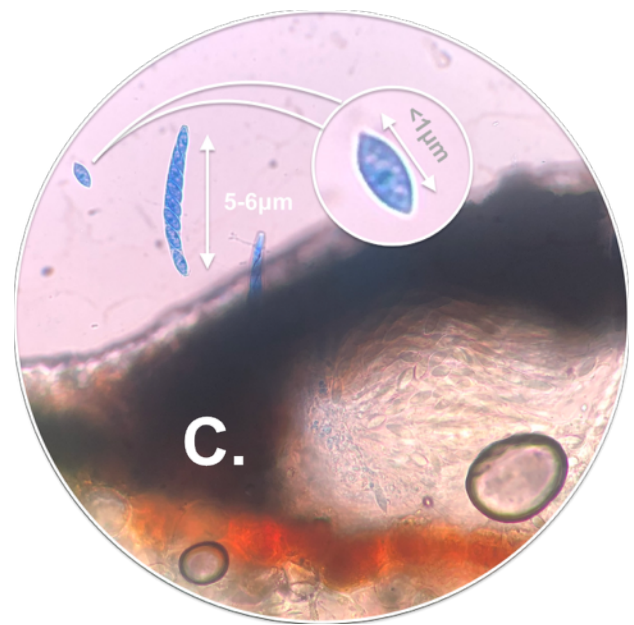
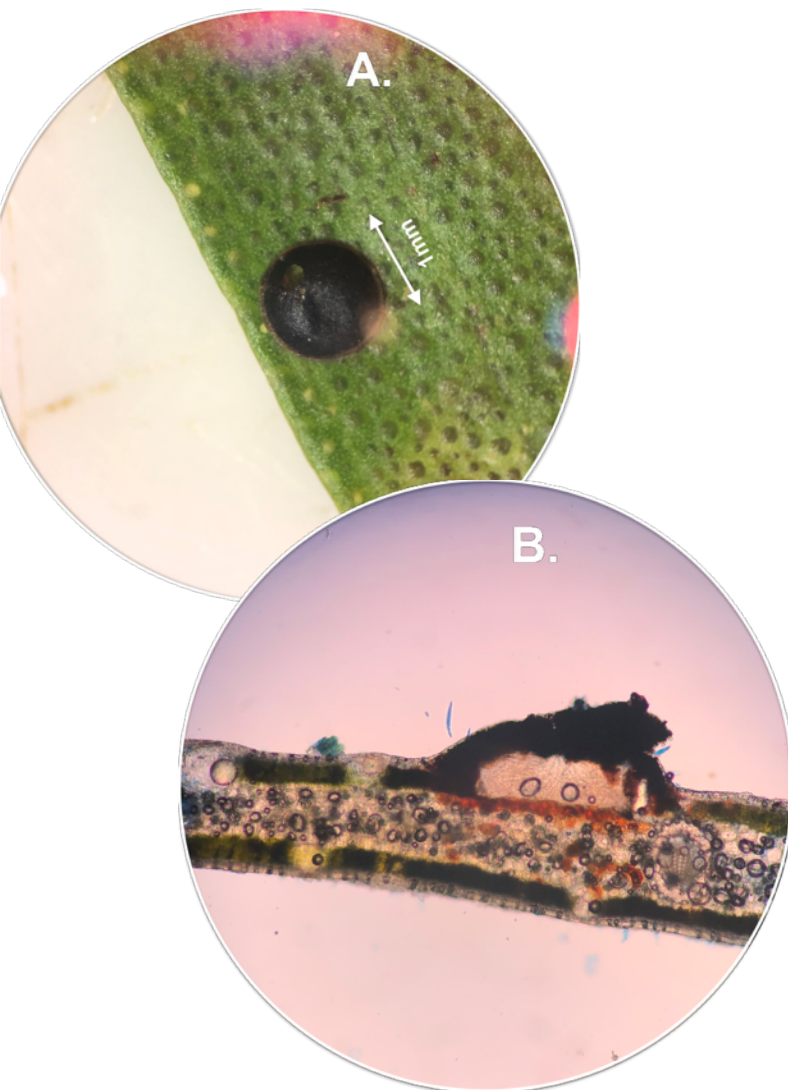


## *Phyllachora* Nitschke ex Fuckel

**Etymology** - Phyllas meaning 'leaf'; chora meaning 'location or 'position'.

**Classification** - Ascomycota, Sordariomycetes, Phyllachorales, Phyllachoraceae, *Phyllachora*

**Clypeus** - mostly epidermal, visible as a 1 mm, dark, circular and often shiny infection on both leaf surfaces. **Perithecia** - numerous; immersed in host tissue; inoperculate with no predetermined opening; several hundred asci float freely within. **Asci** - mostly hyaline; 5-6 $\mu$ m; aseptate; smooth, cylindrical, curved with pointed ends, contains usually 8 ascospores. **Ascospores** - hyaline, >1 $\mu$ m, oval to ovoid or globose. **Habitat** - Parasitic on leaves of vascular plants



**Figure 1.** *Phyllachora* collected by Prof. Elizabeth Aitken and described by Kirsten Slemint. **a.** Leaf surface clypeus. **b.** Perithecia immersed in host tissue. **c.** Asci and Ascospores emerging from perithecia

**Notes** - The concept that *Phyllachora* species are host specific has dominated the naming and identification of species but there is some contention to this (Parbery and Langdon, 1964; Mardones et al., 2017). In their observations of *Phyllachora* from Australia on host *Callistemon* species, Pearce and Hyde (1994) described *Phyllachora callistemonis* subsp. *langdonii* and *Phyllachora callistemonis* subsp. *similis*. There are great many morphological similarities between the subspecies (Pearce and Hyde, 1994) so here, no attempt has been made to identify this specimen to the species or subspecies level.

### References

- Mardones, M., Trampe-Jaschik, T., Oster, S., Elliott, M., Urbina, H., Schmitt, I. and Piepenbring, M. (2017). Phylogeny of the order Phyllachorales (Ascomycota, Sordariomycetes): among and within order relationships based on five molecular loci. *Persoonia - Molecular Phylogeny and Evolution of Fungi*, **39**(1), pp.74-90.
- Parbery, D. and Langdon, R. (1964). Studies on graminicolous species of *Phyllachora* Fckl. IV. Evaluation of the criteria of species. *Australian Journal of Botany*, **12**(2), p.265.
- Pearce, C. and Hyde, K. (1994). The genus *Phyllachora* from Australia: observations on taxa from *Callistemon* species. *Mycological Research*, **98**(12), pp.1393-1401.