Poster Presentation 2

P2-04

15 shades of grey - a multi-gene phylogeny and taxonomic review of *Pseudotomentella tristis*, integrating ecological and geographical data

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Purpose and Methods: *Pseudotomentella tristis* s.l. is a commonly collected, grey, corticioid, ectomycorrhizal and probably insect-dispersed fungus with a very wide geographical distribution and a very large ecological amplitude - DNA-sequences and basidiomata attributed to *P. tristis* have been encountered in habitats and with hosts ranging from the Swedish tundra with *Salix polaris* to the neotropics of Mexico with *Abies religiosa*. Aiming to clarify their taxonomy, systematics, morphology, ecology and geographic distribution, we studied the type specimens of *P. tristis* and its seven morphologically similar taxa, as well as 147 recently collected specimens. We produced species trees in the software STACEY and ASTRAL III and gene trees in BEAST 2 and PhyML, based on ITS, LSU, Tef1α and mtSSU sequences generated from basidiome DNA and complemented with ITS data from the UNITE sequence database.
Results and Conclusions: We found *P. tristis* s.l. to contain 15 molecularly and morphologically distinct species. We described ten species as new to science and discovered *P. atrofusca* together with *P. rhizopunctata* to form a sister clade to the remaining species in the *P. tristis* group. These two species, unlike the remaining species in the group, are dimitic. We revealed the previously described *P. umbrina* to indeed be a common species with a wide, Holoarctic range and a very large ecological amplitude, while all other species were found to be considerably less common and seem to have smaller ecological niches.