## SUPPLEMENTARY FIGURES

### Figure S1A

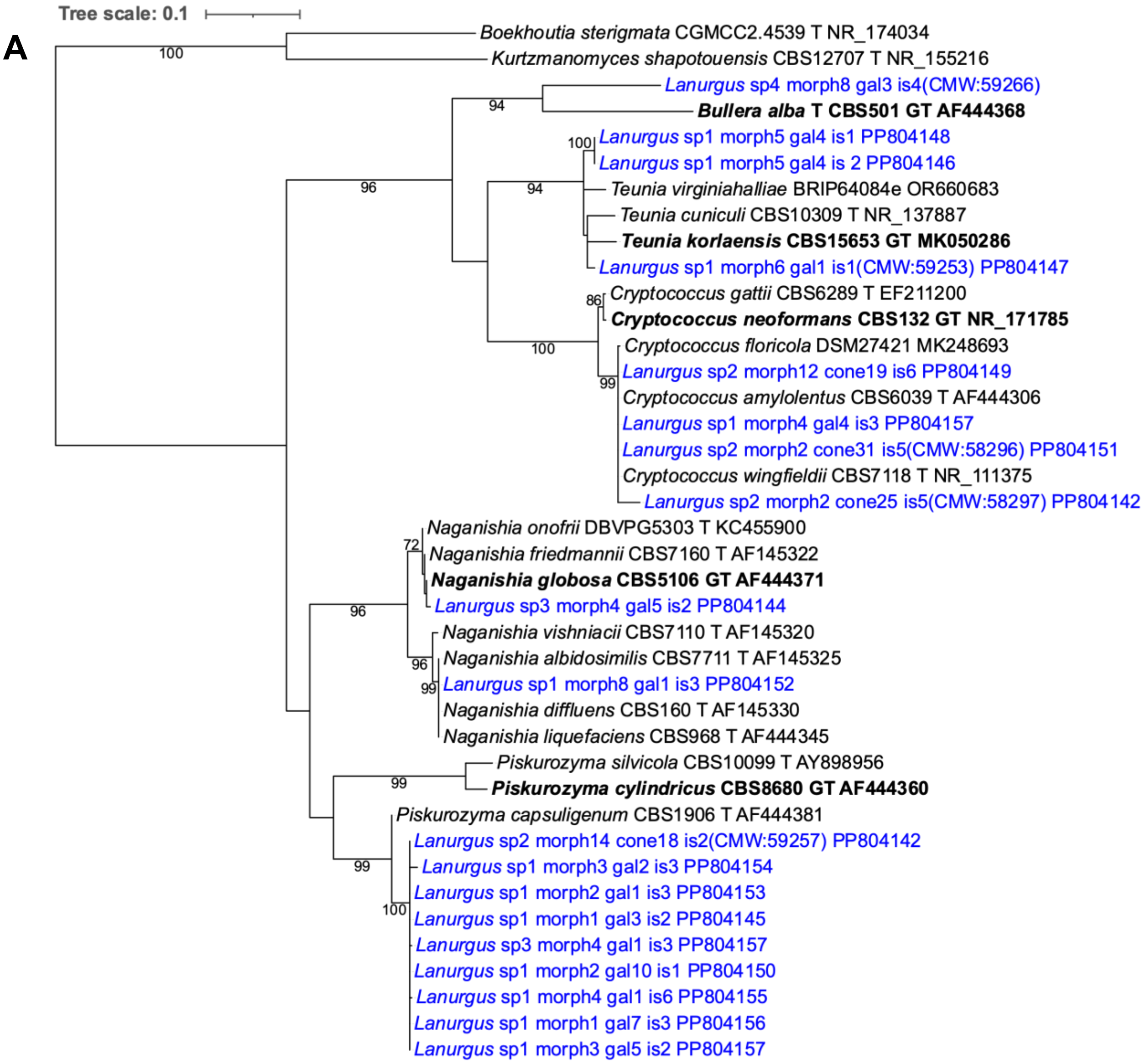


**Figure S1:** Maximum likelihood phylogenetic analyses of the internal transcribed spacer (ITS) region sequences generated in this study (shown in blue). Type strain reference isolates of species that were identified as close relatives during BLASTn searches, any species closely related to those hits, and the type species of each genus (GT; if available), were included. Phylogenetic trees were determined for the commonly occurring (A) Tremellomycete, (B) Saccharomycete, (C) Sordariomycete and (D) Exobasidiomycete species.

**Figure S1B**

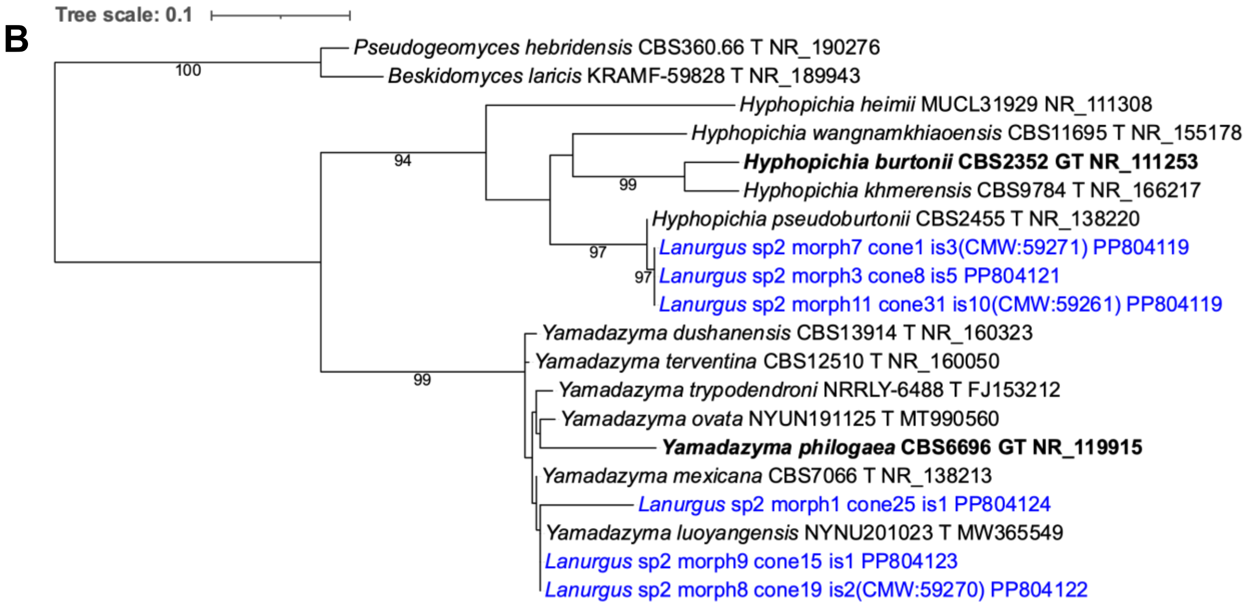

B
Tree scale: 0.1
Pseudogeomyces hebridensis CBS360.66 T NR_190276
Beskidomyces laricis KRAMF-59828 T NR_189943
100
Hyphopichia heimii MUCL31929 NR_111308
Hyphopichia wangnamkhiaoensis CBS11695 T NR_155178
94
Hyphopichia burtonii CBS2352 GT NR_111253
99
Hyphopichia khmerensis CBS9784 T NR_166217
Hyphopichia pseudoburtonii CBS2455 T NR_138220
Lanurgus sp2 morph7 cone1 is3(CMW:59271) PP804119
97
97
Lanurgus sp2 morph3 cone8 is5 PP804121
Lanurgus sp2 morph11 cone31 is10(CMW:59261) PP804119
Yamadazyma dushanensis CBS13914 T NR_160323
Yamadazyma terventina CBS12510 T NR_160050
99
Yamadazyma trypodendroni NRRLY-6488 T FJ153212
Yamadazyma ovata NYUN191125 T MT990560
Yamadazyma philogaea CBS6696 GT NR_119915
Yamadazyma mexicana CBS7066 T NR_138213
Lanurgus sp2 morph1 cone25 is1 PP804124
Yamadazyma luoyangensis NYNU201023 T MW365549
Lanurgus sp2 morph9 cone15 is1 PP804123
Lanurgus sp2 morph8 cone19 is2(CMW:59270) PP804122

**Figure S1C**

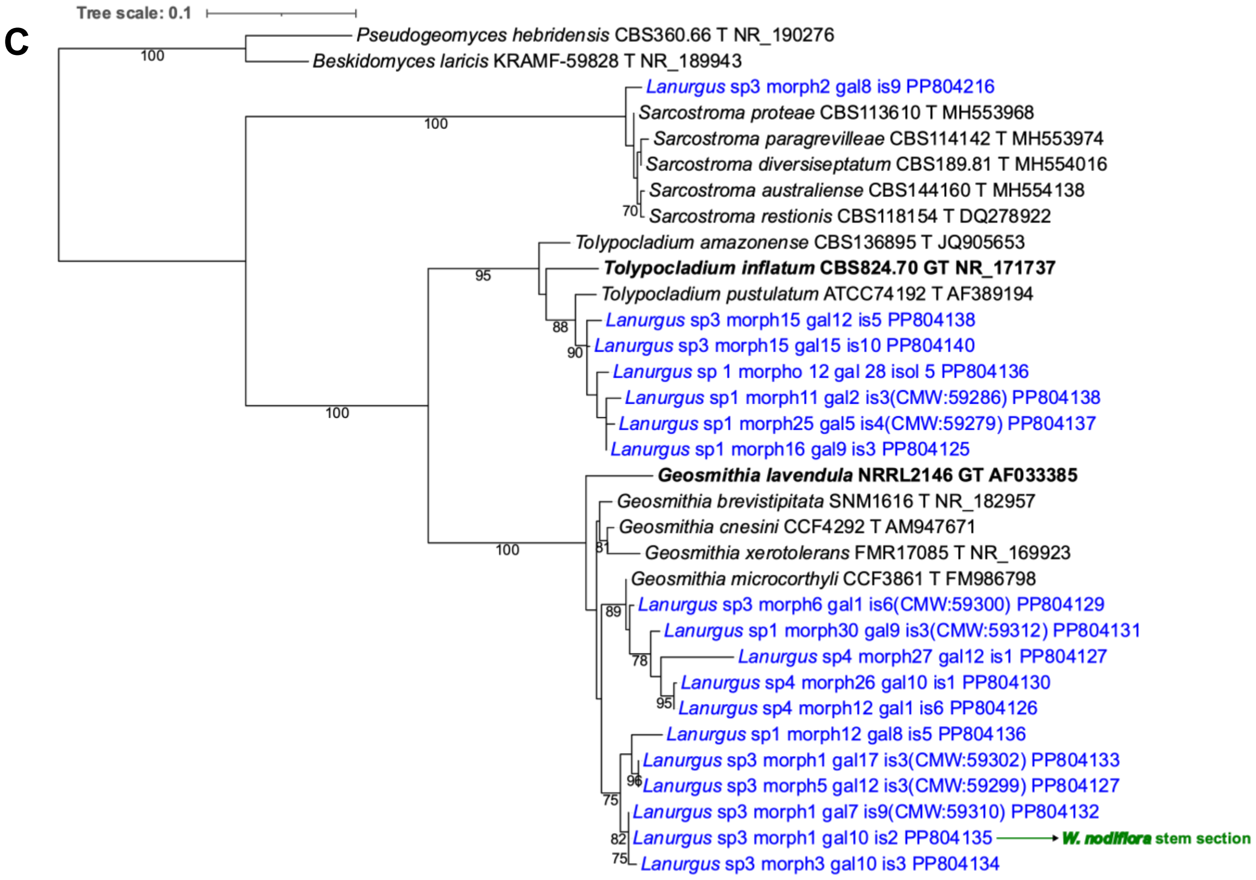
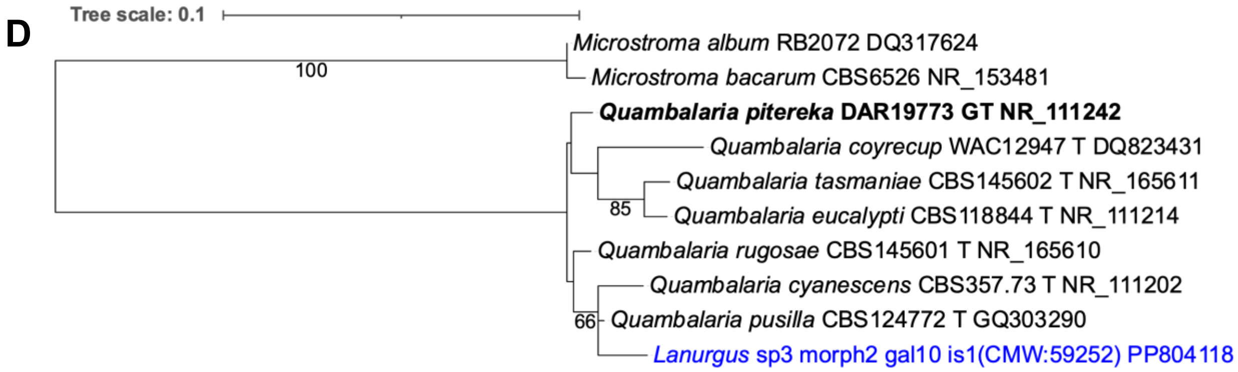

C
Tree scale: 0.1
*Pseudogeomyces hebridensis* CBS360.66 T NR_190276
*Beskidomyces laricis* KRAMF-59828 T NR_189943
100
*Lanurgus* sp3 morph2 gal8 is9 PP804216
*Sarcostroma proteae* CBS113610 T MH553968
*Sarcostroma paragrevilleae* CBS114142 T MH553974
*Sarcostroma diversiseptatum* CBS189.81 T MH554016
*Sarcostroma australiense* CBS144160 T MH554138
*Sarcostroma restionis* CBS118154 T DQ278922
100
70
*Tolypocladium amazonense* CBS136895 T JQ905653
***Tolypocladium inflatum* CBS824.70 GT NR_171737**
*Tolypocladium pustulatum* ATCC74192 T AF389194
*Lanurgus* sp3 morph15 gal12 is5 PP804138
*Lanurgus* sp3 morph15 gal15 is10 PP804140
*Lanurgus* sp 1 morpho 12 gal 28 isol 5 PP804136
*Lanurgus* sp1 morph11 gal2 is3(CMW:59286) PP804138
*Lanurgus* sp1 morph25 gal5 is4(CMW:59279) PP804137
*Lanurgus* sp1 morph16 gal9 is3 PP804125
95
88
90
100
***Geosmithia lavendula* NRRL2146 GT AF033385**
*Geosmithia brevistipitata* SNM1616 T NR_182957
*Geosmithia cnesini* CCF4292 T AM947671
*Geosmithia xerotolerans* FMR17085 T NR_169923
*Geosmithia microcorthyli* CCF3861 T FM986798
*Lanurgus* sp3 morph6 gal1 is6(CMW:59300) PP804129
*Lanurgus* sp1 morph30 gal9 is3(CMW:59312) PP804131
*Lanurgus* sp4 morph27 gal12 is1 PP804127
*Lanurgus* sp4 morph26 gal10 is1 PP804130
*Lanurgus* sp4 morph12 gal1 is6 PP804126
*Lanurgus* sp1 morph12 gal8 is5 PP804136
*Lanurgus* sp3 morph1 gal17 is3(CMW:59302) PP804133
*Lanurgus* sp3 morph5 gal12 is3(CMW:59299) PP804127
*Lanurgus* sp3 morph1 gal7 is9(CMW:59310) PP804132
*Lanurgus* sp3 morph1 gal10 is2 PP804135
***W. nodiflora*** stem section
*Lanurgus* sp3 morph3 gal10 is3 PP804134
100
81
89
78
95
96
75
82
75

**Figure S1D**


D
Tree scale: 0.1
100
*Microstroma album* RB2072 DQ317624
*Microstroma bacarum* CBS6526 NR_153481
***Quambalaria pitereka* DAR19773 GT NR_111242**
*Quambalaria coyrecup* WAC12947 T DQ823431
*Quambalaria tasmaniae* CBS145602 T NR_165611
85
*Quambalaria eucalypti* CBS118844 T NR_111214
*Quambalaria rugosae* CBS145601 T NR_165610
*Quambalaria cyanescens* CBS357.73 T NR_111202
66
*Quambalaria pusilla* CBS124772 T GQ303290
*Lanurgus* sp3 morph2 gal10 is1(CMW:59252) PP804118