a

ML tree: Polyporaceae and the antrodia clade
each monophyletic (gCF 97.8 / 58.7);

Ganoderma boninense
Ganoderma sinense
Ganoderma adspersum
Ganoderma lingzhi
Ganoderma lucidum
Ganoderma resinaceum
Ganoderma leucocontextum
Ganoderma tsugae
Perenniporia sp. SCHI0302
Perenniporia sp. SCHI0334
Perenniporia sp. SCHI0314.
Perenniporia sp. SCHI0330
Perenniporia sp. SCHI0310
Cryptoporus qinlingensis
Dichomitus squalens
Lentinus brumalis
Lentinus arcularius
Cerioporus squamosus?
Lentinus tigrinus
Coriolopsis trogii
Daedaleopsis nitida
Daedaleopsis sinensis
Earliella scabrosa
Fomes fomentarius
Polyporus parvovarius
Polyporus umbellatus
Epithele typhae
Grammothele lineata
Trametes hirsuta
Trametes sp.
Trametes villosa
Trametes suaveolens
Trametes versicolor
Lenzites betulinus
Trametes gibbosa
Trametes polyzona
Pilatotrama ljubarskyi
Trametes cingulata
Trametes maxima
Trametes meyenii
Trametes elegans
Cubamyces lactineus
Cubamyces menziesii
Cubamyces sp.
Trametes coccinea
Trametes sanguinea
Trametes punicea
Fomitopsis betulina
Fomitopsis schrenkii
Fomitopsis palustris
Daedalea quercina
Fomitopsis serialis
Rhodofomes roseus
Fomitopsis pulvina
Wolfiporia cocos
Wolfiporia hoelen
Adustoporia sinuosa
Amyloporia xantha
Postia placenta
Fibroporia radiculosa
Laetiporus ailaoshanensis
Laetiporus sulphureus
Laricifomes officinalis
Taiwanofungus camphoratus
Taiwanofungus sp.
Sparassis crispa
Sparassis latifolia
Sparassis minoensis
Pycnoporellus fulgens
Amylocystis lapponica
Bjerkandera adusta
Irpex lacteus
Abortiporus biennis

Ganoderma
Perenniporia
Lentinus
Daedaleopsis
Polyporus
Polyporaceae
Fomitopsidaceae
Adustoporiaceae
Fibroporiaceae
Laetiporiaceae
Sparassidaceae
Pycnoporellaceae
Dacryobolaceae

0.05 substitutions/site

node colour: gene concordance factor (gCF, %)
0 20 40 60 80 100

node labels: gCF / sCF (%)
SH-aLRT / UFBoot = 100/100 except † 4 nodes
73 genomes, 1,000 BUSCO loci, 2,237,193 bp

outgroup (3 taxa)
other ingroup (70 taxa)

b

ASTRAL agrees on 66 of 70 branches;
all four disagreements are at gCF < 25

ML (concatenation)

ASTRAL (coalescent)

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Ganoderma sinense
Ganoderma adspersum
Ganoderma lingzhi
Ganoderma lucidum
Ganoderma resinaceum
Ganoderma leucocontextum
Ganoderma tsugae
Perenniporia sp. SCHI0302.S.4
Perenniporia sp. SCHI0334.S.2
Perenniporia sp. SCHI0314.S.1
Perenniporia sp. SCHI0330.S.2
Perenniporia sp. SCHI0310.S.2
Cryptoporus qinlingensis
Dichomitus squalens
Lentinus brumalis
Lentinus arcularius
Cerioporus squamosus
Lentinus tigrinus
Coriolopsis trogii
Daedaleopsis nitida
Daedaleopsis sinensis
Earliella scabrosa
Fomes fomentarius
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Polyporus umbellatus
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Sparassis minoensis
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Amylocystis lapponica
Bjerkandera adusta
Irpex lacteus
Abortiporus biennis

branch absent from the other tree
branch present in both trees
taxon changes position