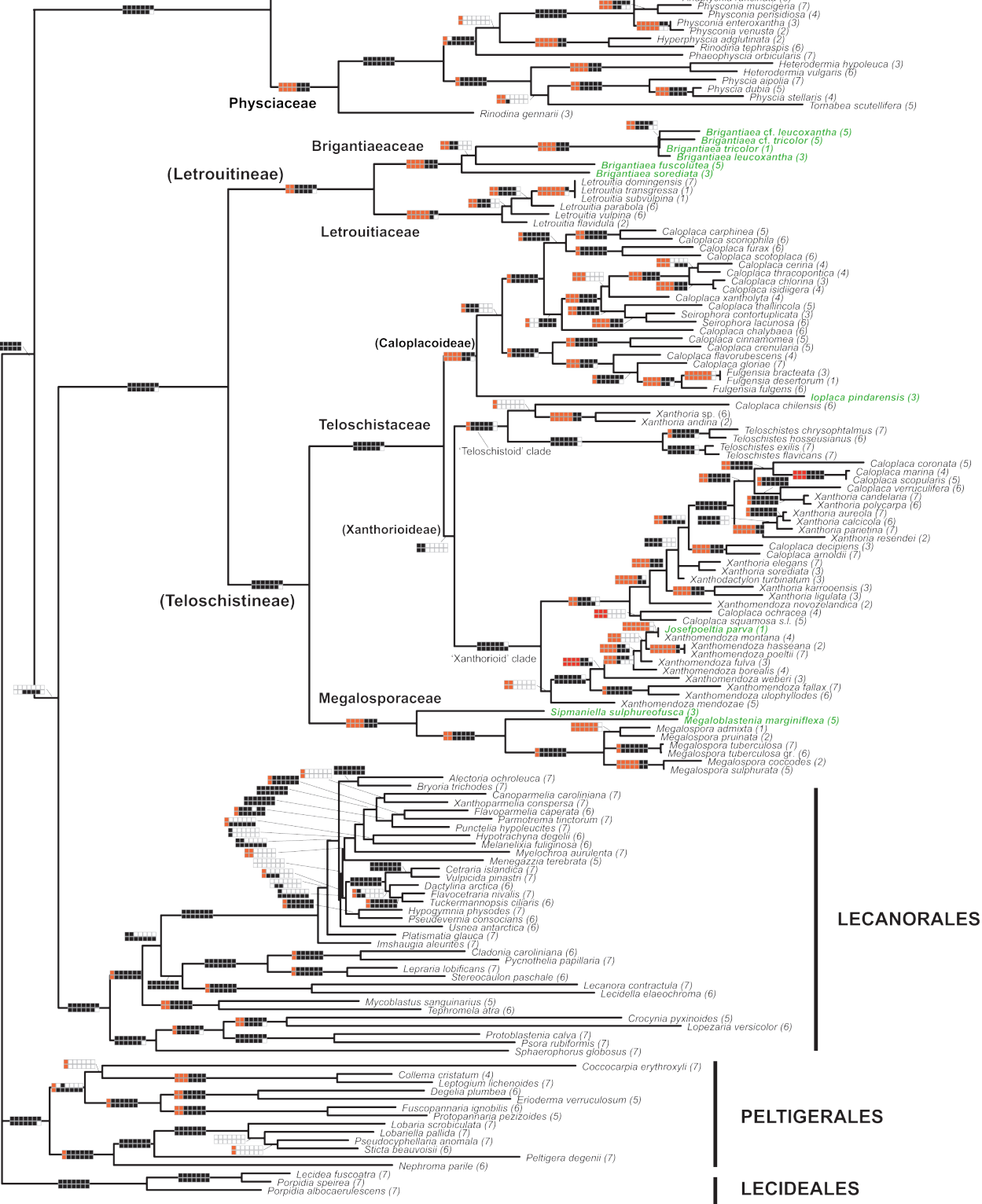


45-Taxa (7-locus)  
85-Taxa (7+6-locus)  
107-Taxa (7+6+5-locus)  
123-Taxa (7+6+5+4-locus)  
147-Taxa (7+6+5+4+3-locus)  
160-Taxa (7+6+5+4+3+2-locus)  
167-Taxa (7+6+5+4+3+2+1-locus)

BP ≥70%/PP≥95%  
Not applicable due to missing taxa  
BP <70%/PP<95%/node not resolved



(CALICIALES)

(TELOSCHISTALES)

LECANORALES

PELTIGERALES

LECIDEALES

Figure 1

**Figure 1.** Most likely tree (-ln likelihood = -122411.558258) depicting phylogenetic relationships among 78 members of the Teloschistales, 39 of the Caliciales, and 34 of the Lecanorales based on a combined 5.8S, nucSSU, nucLSU, mitSSU, *RPB1* and *RPB2* (two loci) supermatrix (7+6+5+4+3+2+1-locus dataset). Sixteen species from the Peltigerales and Lecideales were used to form the outgroup. Numbers in parentheses after species names indicate the number of loci for which DNA sequences were available for that species. The 14-box grids on internodes show support with different phylogenetic methods and datasets. Top row boxes indicate bootstrap values calculated with RAxML and bottom row boxes indicate posterior probabilities calculated with MrBayes on each of the 7 datasets with different number of loci, taxa, and proportion of missing data (Tables 1 and 2). Red boxes indicate cases where internodal support is not applicable due to the absence of that internode resulting from the absence of at least one of the two derived lineages for a specific analysis, compared to the largest 167 taxa dataset. Black boxes indicate RAxML bootstrap values  $\geq 70\%$  or MrBayes posterior probability values  $\geq 95\%$ . White boxes indicate RAxML bootstrap values  $< 70\%$ , or MrBayes posterior probability values  $< 95\%$ . In green are highlighted the genera included within a molecular phylogenetic study for the first time. Names in quotes refer to rank-less taxonomic entities proposed here for the first time. Names in parentheses are provisional taxonomic names proposed here to ultimately forge a new, phylogenetically based, classification for the Teloschistales and Caliciales.