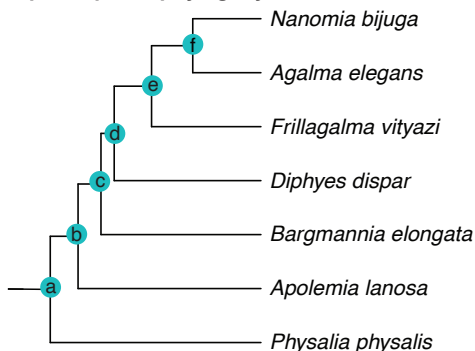
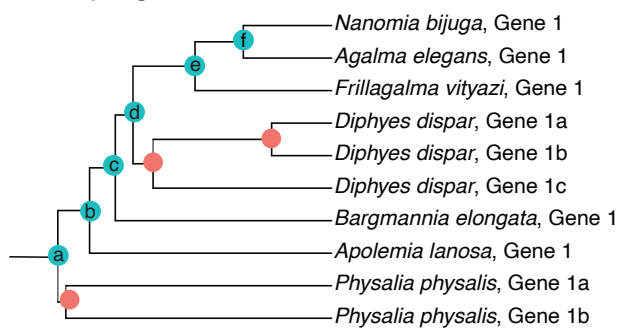


1 Identify speciation and duplication nodes in the gene tree

Siphonophore phylogeny

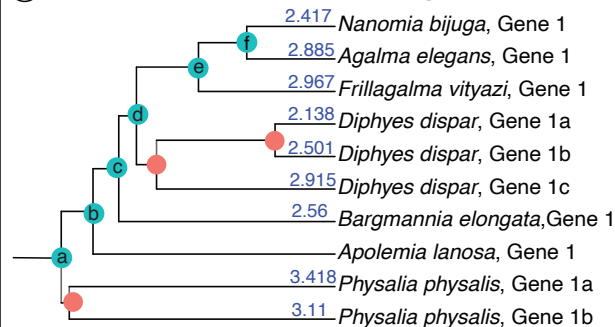


An exemplar gene tree

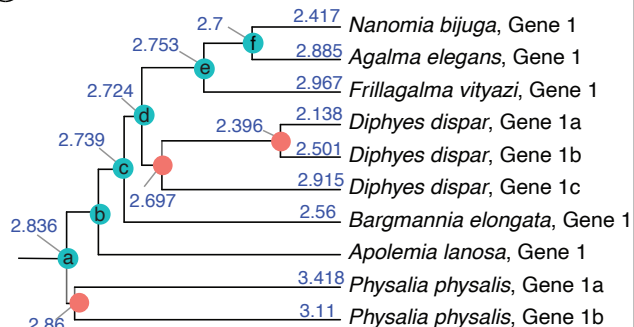


● Speciation event ● Duplication event

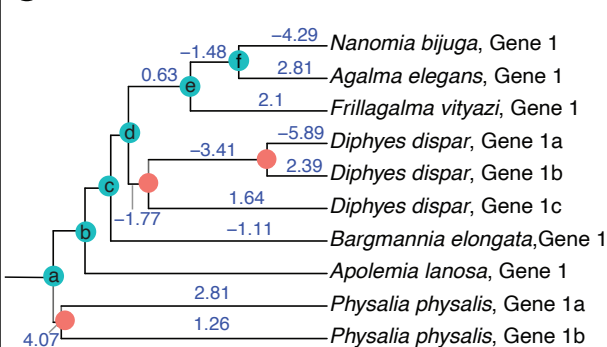
2 Map expression values to tips of gene tree



3 Reconstruct ancestral expression values at nodes



4 Calculate scaled change across branches



$$\text{Scaled change} = \frac{\text{Child node} - \text{parent node}}{\text{Calibrated branch length}}$$

5 Isolate corresponding branches across all gene trees

