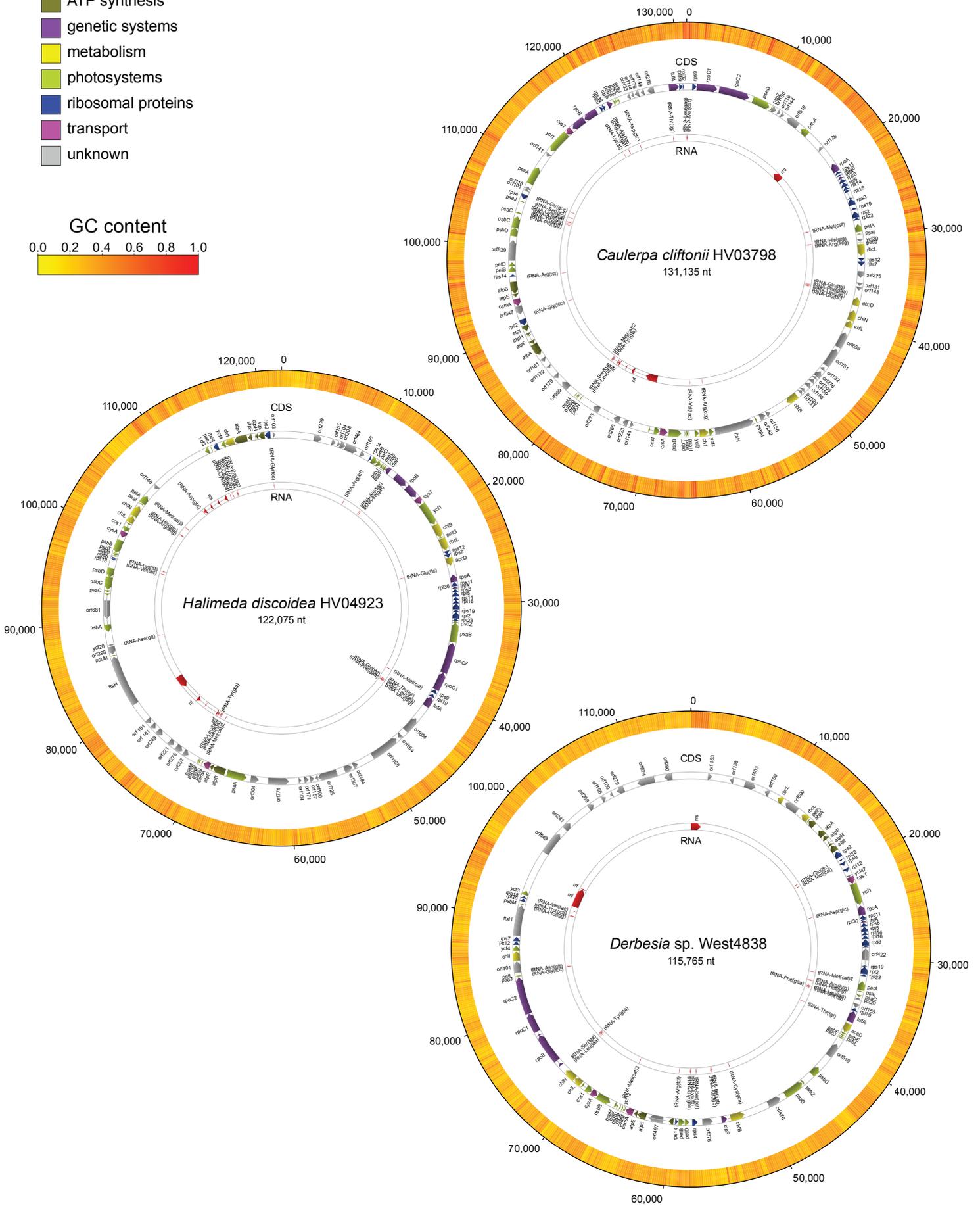


Gene categories

- ATP synthesis
- genetic systems
- metabolism
- photosystems
- ribosomal proteins
- transport
- unknown

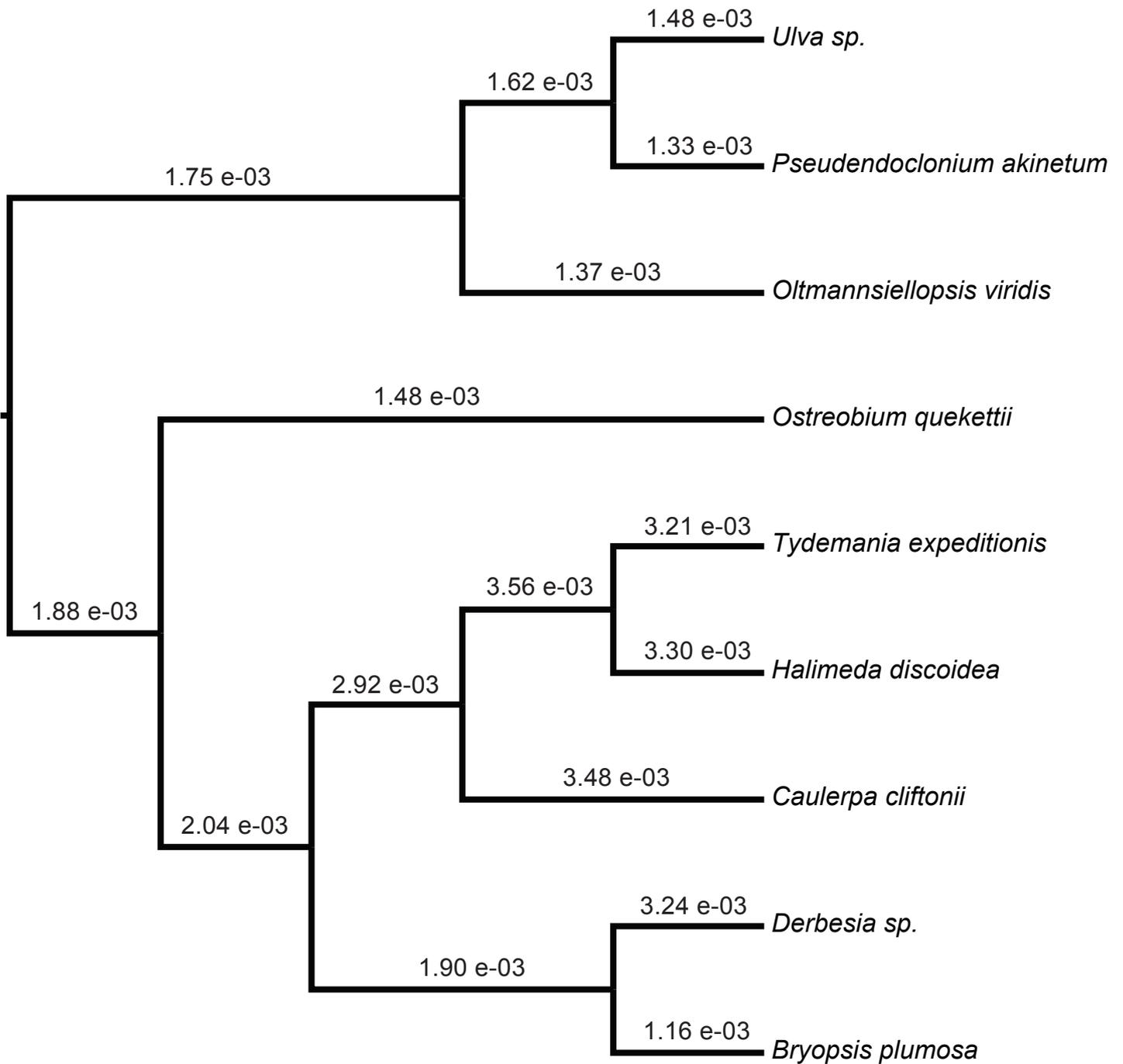
GC content



Supplementary Figure S1: Gene map of the chloroplast genomes of *Caulerpa cliftonii*, *Halimeda discoidea* and *Derbesia* sp..



Supplementary Figure S2. Coverage of the four chloroplast genomes sequenced here, generated by mapping the reads to the final contigs in Geneious. Two regions seem to contain a polymorphic or unknown number of repeats in *Halimeda* (zoom). One of the regions was assembled but shows a coverage peak, indicating that there might be more repeats than what has been estimated by the assembler. The other gap was filled with 100 Ns (coverage minimum observed in the zoom). Other peaks of coverage can be observed in highly conserved regions (e.g. 16S rRNA gene). These are likely due to bacterial sequences (contaminants or symbiotic).



Supplementary Figure S3. Rates of molecular evolution estimated with a relaxed molecular clock model. Branch lengths and ages were estimated under a relaxed lognormal molecular clock in PhyloBayes (Lartillot et al. 2009), and the rates were calculated by dividing branches' length by age.