S2 Table. Partition schemes and sequence evolution models used for combined psbA and rbcL datasets in implementing (A) maximum likelihood phylogenetic analysis and (B) Bayesian phylogenetic analysis.

(A)

| Dataset       | Partition             | Model of sequence evolution |
|---------------|-----------------------|-----------------------------|
| Sporolithales | psbA codon 1          | TNe + I + G4                |
|               | psbA codon 2 + rbcL codon 2 | TN + F + I                |
|               | psbA codon 3          | TPM3u + F + I + G4         |
|               | rbcL codon 1          | GTR + F + G4               |
|               | rbcL codon 3          | TIM + F + G4               |
| Corallinales  | psbA codon 1          | TNe + I + G4                |
|               | psbA codon 2          | JC + I                     |
|               | psbA codon 3          | TIM3 + F + I + G4          |
|               | rbcL codon 1          | GTR + F + I + G4           |
|               | rbcL codon 2          | TIM + F + I + G4           |
|               | rbcL codon 3          | TIM2 + F + I + G4          |
| Hapalidiales  | psbA codon 1 + rbcL Codon 1 + | GTR + F + I + G4          |
|               | psbA codon 3          |                               |
|               | psbA codon 2 + rbcL codon 2 + | TIM + F + I + G4          |
|               | rbcL codon 3          |                               |

(B)

| Dataset       | Partition             | Model of sequence evolution |
|---------------|-----------------------|-----------------------------|
| Sporolithales | psbA codon 1 + rbcL codon 1 + | GTR + I                |
|               | psbA codon 3          | GTR + I + G4               |
|               | psbA codon 2 + rbcL codon 2 + | GTR + I + G4               |
|               | rbcL codon 3          |                               |
| Corallinales  | psbA codon 1 + rbcL codon 1 | SYM + I + G4               |
|               | psbA codon 2 + rbcL codon 2 + | GTR + I + G4               |
|               | psbA codon 3 + rbcL codon 3 |                               |
| Hapalidiales | psbA codon 1 + rbcL codon 1 + | GTR + I + G4 |
|--------------|-------------------------------|----------------|
|              | psbA codon 3 + rbcL codon 3   |                |
|              | psbA codon 2 + rbcL codon 2   | F81 + I + G4   |