

Table S2. The best partitioning schemes and substitution models for PCG123 dataset comprising 13 PCGs of 59 species used for BI phylogenetic analyses.

Subset	Best Model	Partition names
Partition1	GTR+I+G	<i>atp6_codon1, nad4L_codon1, nad1_codon1, nad4_codon1, nad5_codon1</i>
Partition2	GTR+I+G	<i>nad3_codon2, atp6_codon2, atp8_codon2, nad2_codon2, nad6_codon2</i>
Partition3	GTR+I+G	<i>cytb_codon3, nad3_codon3, atp8_codon3, atp6_codon3, nad6_codon3</i>
Partition4	GTR+I+G	<i>atp8_codon1, nad2_codon1, nad3_codon1, nad6_codon1</i>
Partition5	GTR+I+G	<i>cox1_codon1</i>
Partition6	GTR+I+G	<i>cox1_codon2, cox3_codon2, cox2_codon2, cytb_codon2</i>
Partition7	HKY+I+G	<i>cox1_codon3</i>
Partition8	GTR+I+G	<i>cox3_codon1, cox2_codon1, cytb_codon1</i>
Partition9	HKY+G	<i>cox3_codon3, cox2_codon3</i>
Partition10	GTR+I+G	<i>nad5_codon2, nad4_codon2, nad1_codon2, nad4L_codon2,</i>
Partition11	HKY+G	<i>nad1_codon3</i>
Partition12	GTR+G	<i>nad2_codon3</i>
Partition13	HKY+G	<i>nad4_codon3, nad4L_codon3, nad5_codon3</i>