**Table S5.** Results and interpretation of Xia’s test of saturation, given either a symmetrical (Sym) or asymmetrical (Asym) tree (Xia, X., Z. Xie, M. Salemi, L. Chen, and Y. Wang. 2003. An index of substitution saturation and its application. Molecular Phylogenetics and Evolution 26: 1–7). Results suggesting saturation from the transitions vs. transversions plots (see Fig. S1) are in bold. Iss refers to the index of substitution saturation and Iss.c refers to the critical index of substitution saturation, respectively

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | *COI* | Cyt B | TMO-4C4 | Rag1 |
| codon 1st + 2nd | Iss | 0.0519 | 0.1739 | 0.1583 | 0.0352 |
|  | Iss.c, Sym | 0.7453\* | 0.7484\* | 0.7467\* | 0.7841\* |
|  | Iss.s, Asym | 0.6338\* | 0.6786\* | 0.6828\* | 0.6952\* |
| codon 3rd | Iss | 0.6399 | **0.6717** | 0.1843 | 0.1164 |
|  | Iss.c, Sym | 0.7329\* | **0.7604** | 0.7722\* | 0.7495\* |
|  | Iss.s, Asym | **0.6328** | **0.7160** | 0.7217\* | 0.6378\* |

\* Significant *p-*values.

|  |  |  |
| --- | --- | --- |
|  | Significant | Not Significant |
| Iss < Iss.c | Little saturation | Substantial saturation |
| Iss > Iss.c | Useless sequences | Very poor for phylogenetics |