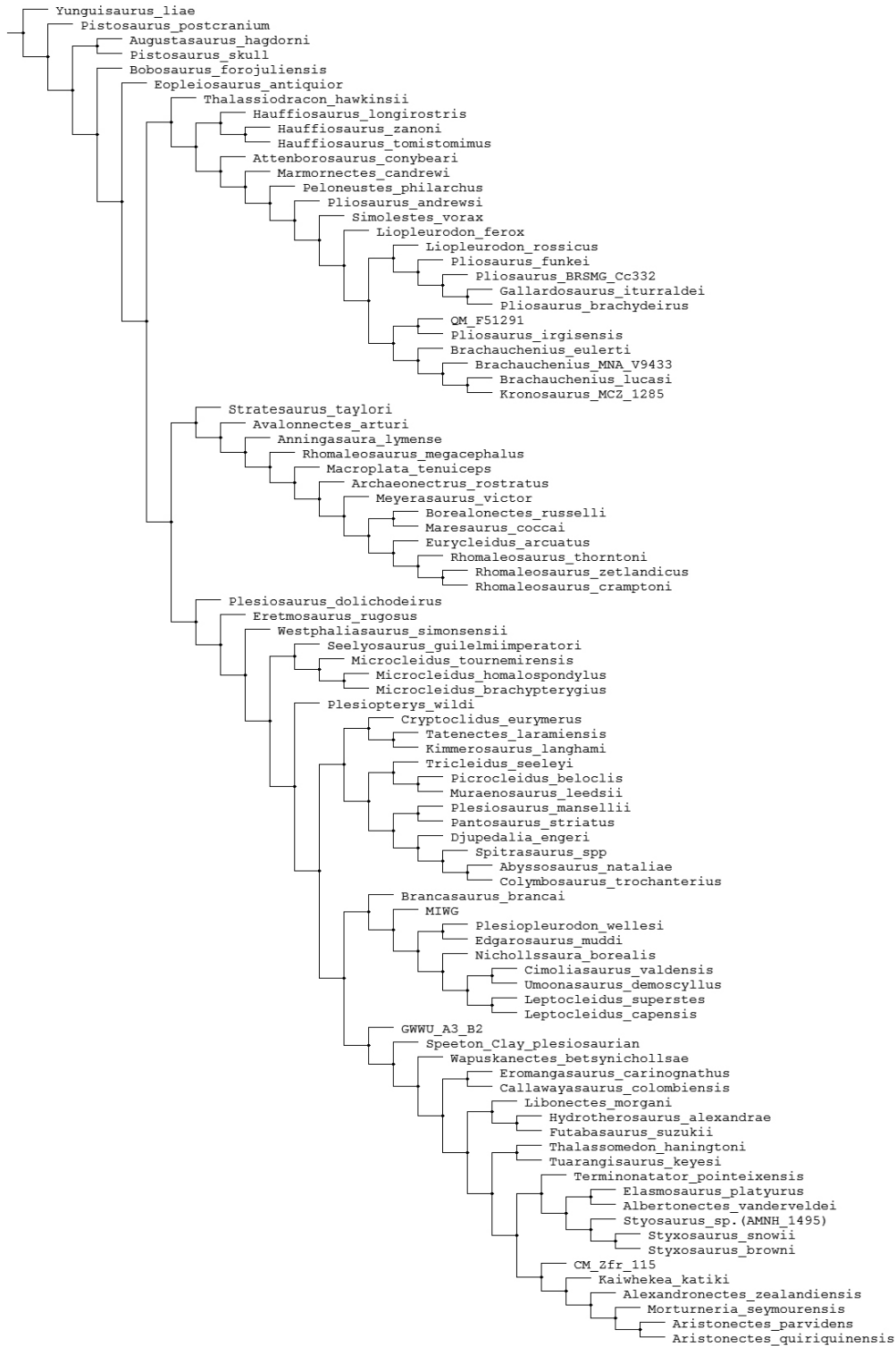
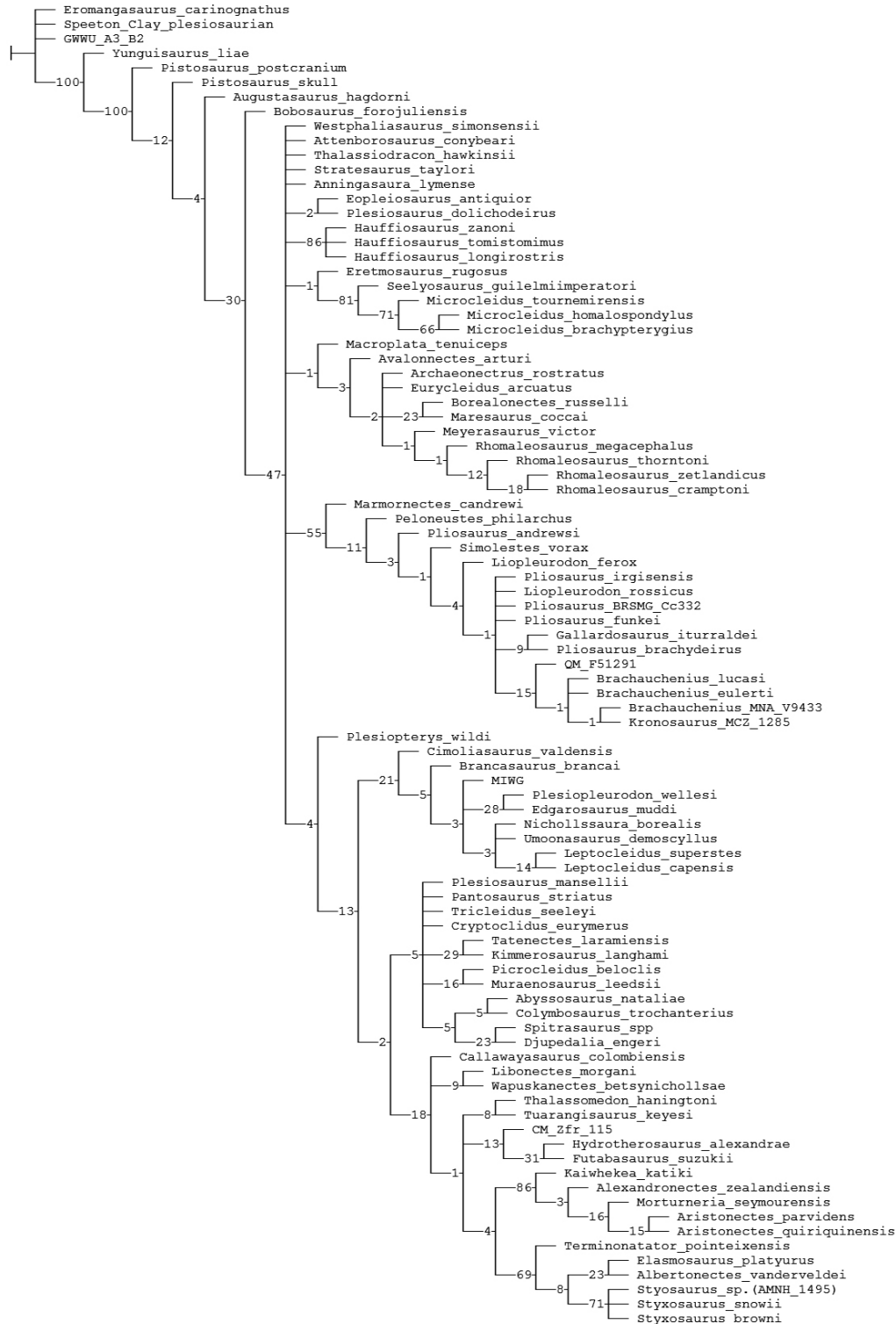


## SUPPLEMENTARY DATA



**Figure 1:** Strict consensus cladogram of over 5,000 most parsimonious cladograms (length=1524 steps; RI and CI cannot be calculated due to overflowed replications).



**Figure 2:** Cladogram (length=1738 steps; Consistency Index = 0.24; Retention Index = 0.61) recovered using Bootstrap (2,000 replicates, Standard), with the datamatrix excluding GWWU A3B2, Speeton Clay Plesiosaurian and *Eromangasaurus carinognathus*. Aristonectinae was recovered with an 86% of support.