



[http://app.pan.pl/SOM/app61-SerranoMartinez\\_etal\\_SOM.pdf](http://app.pan.pl/SOM/app61-SerranoMartinez_etal_SOM.pdf)

## SUPPLEMENTARY ONLINE MATERIAL FOR

### **Isolated theropod teeth from the Middle Jurassic of Niger and the early dental evolution of Spinosauridae**

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#### **Supplementary Online Material**

**Figures 1-4.** Strict consensus cladograms.

#### **References**

**SOM 1.** PAST file. Character matrix used in the cluster analysis. It was adapted from the dentition-based datamatrix of Hendrickx and Mateus (2014), using all the lateral teeth characters and HB crowns included.

[http://app.pan.pl/SOM/app61-SerranoMartinez\\_etal\\_SOM/SOM\\_1.tnt](http://app.pan.pl/SOM/app61-SerranoMartinez_etal_SOM/SOM_1.tnt)

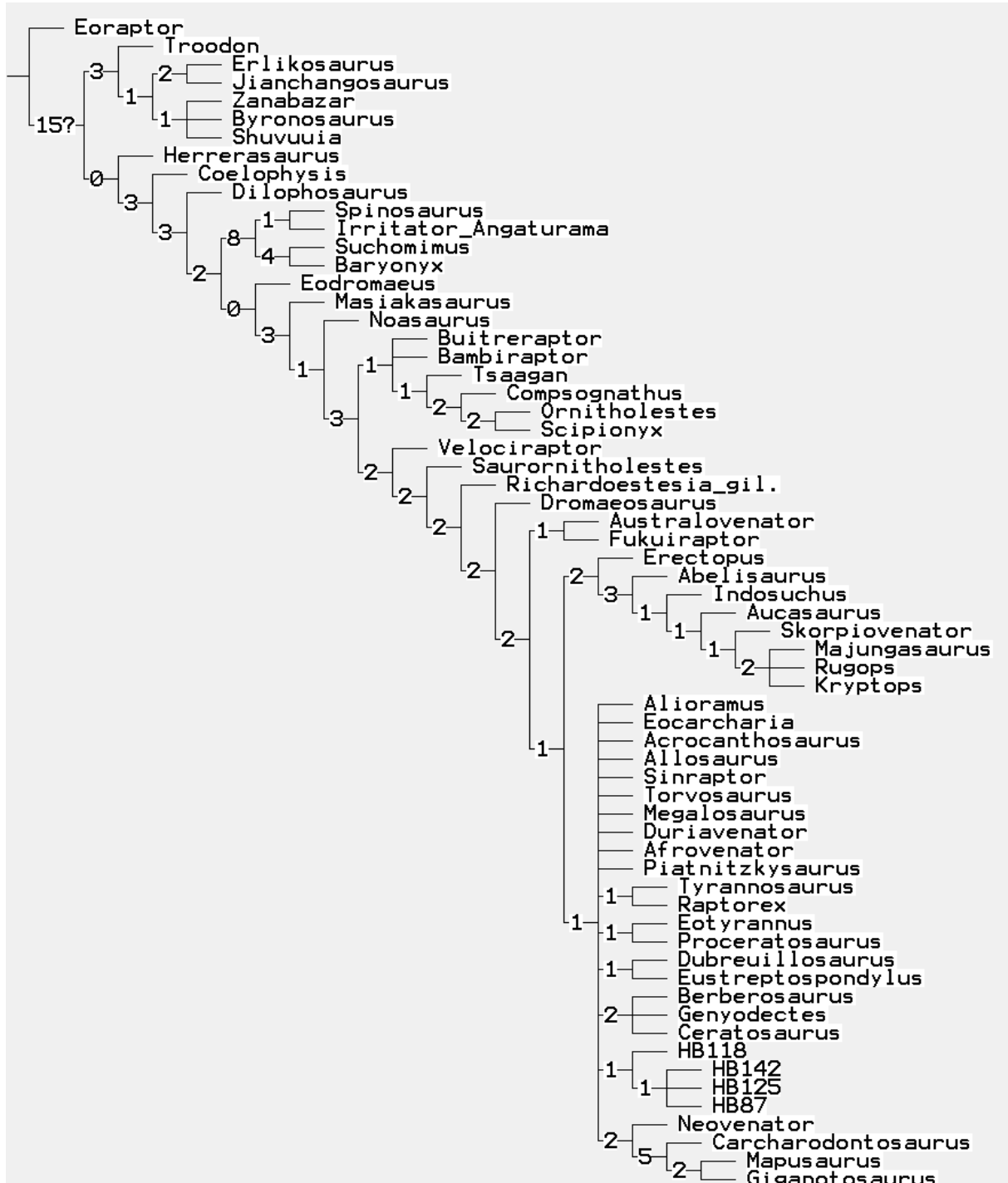
**SOM 2.** TNT file. Dentition based characters matrix from Hendrickx and Mateus (2014) with HB crowns coded as lateral teeth.

[http://app.pan.pl/SOM/app61-SerranoMartinez\\_etal\\_SOM/SOM\\_2.tnt](http://app.pan.pl/SOM/app61-SerranoMartinez_etal_SOM/SOM_2.tnt)

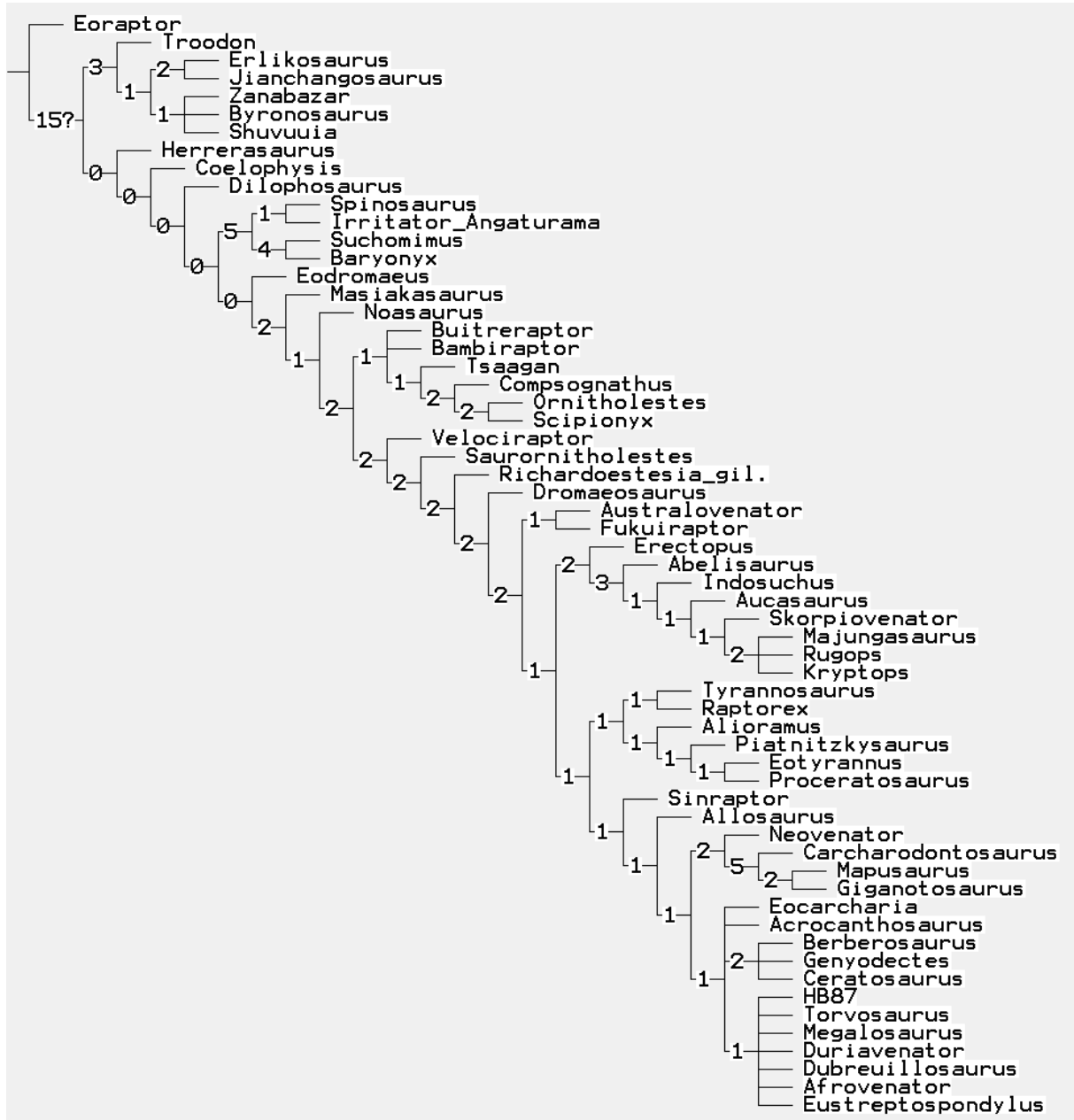
**SOM 3.** TNT file. Supermatrix from Hendrickx and Mateus (2014) with HB crowns coded as lateral teeth.

[http://app.pan.pl/SOM/app61-SerranoMartinez\\_etal\\_SOM/SOM\\_3.tnt](http://app.pan.pl/SOM/app61-SerranoMartinez_etal_SOM/SOM_3.tnt)

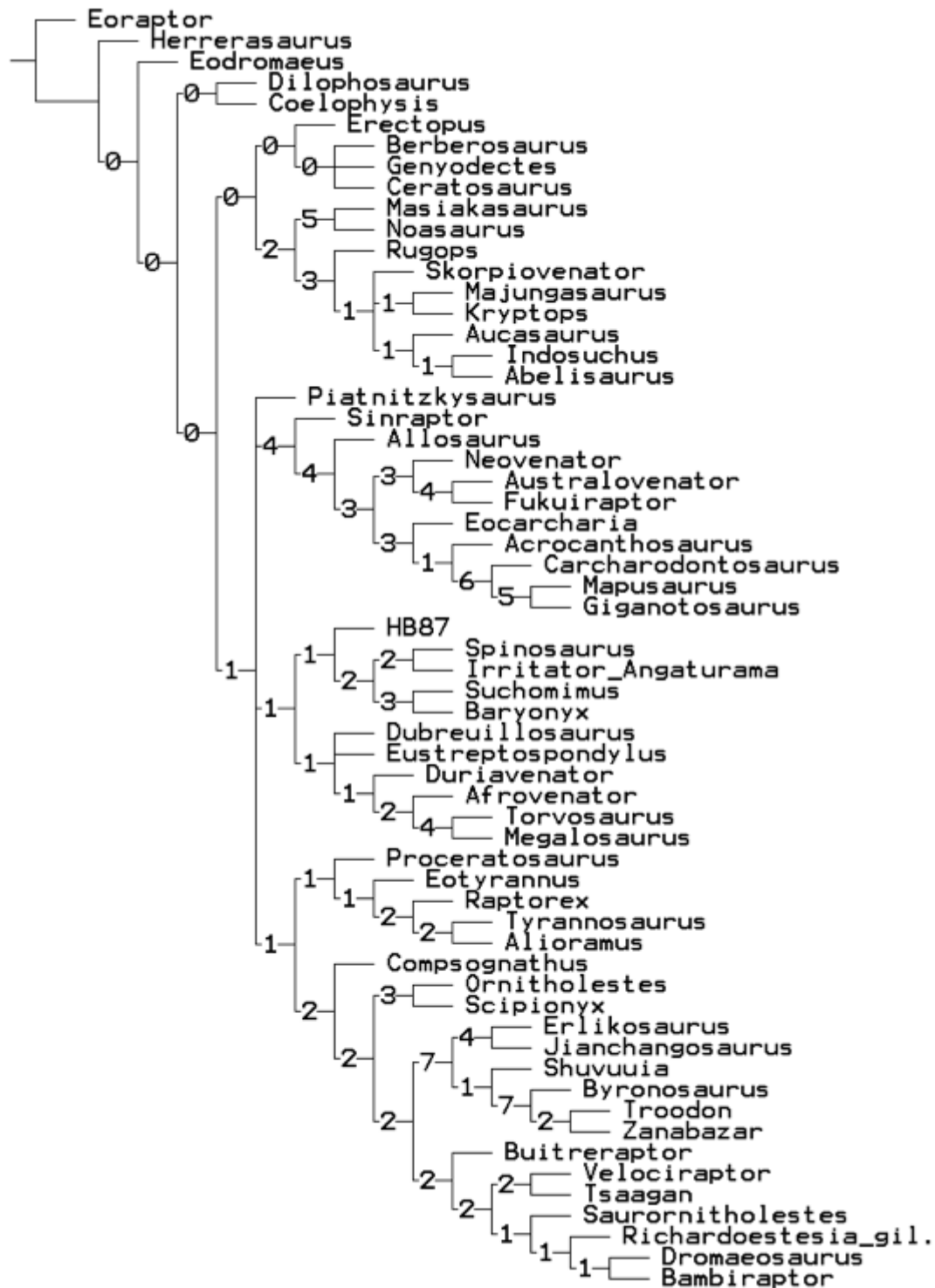
**Figure 1.** Strict consensus cladogram after sixteen most parsimonious trees (CI = 0.334, RI = 0.581) obtained from the supermatrix of 141 discrete characters from Hendrickx and Mateus (2014) with all HB crowns included in the analysis.



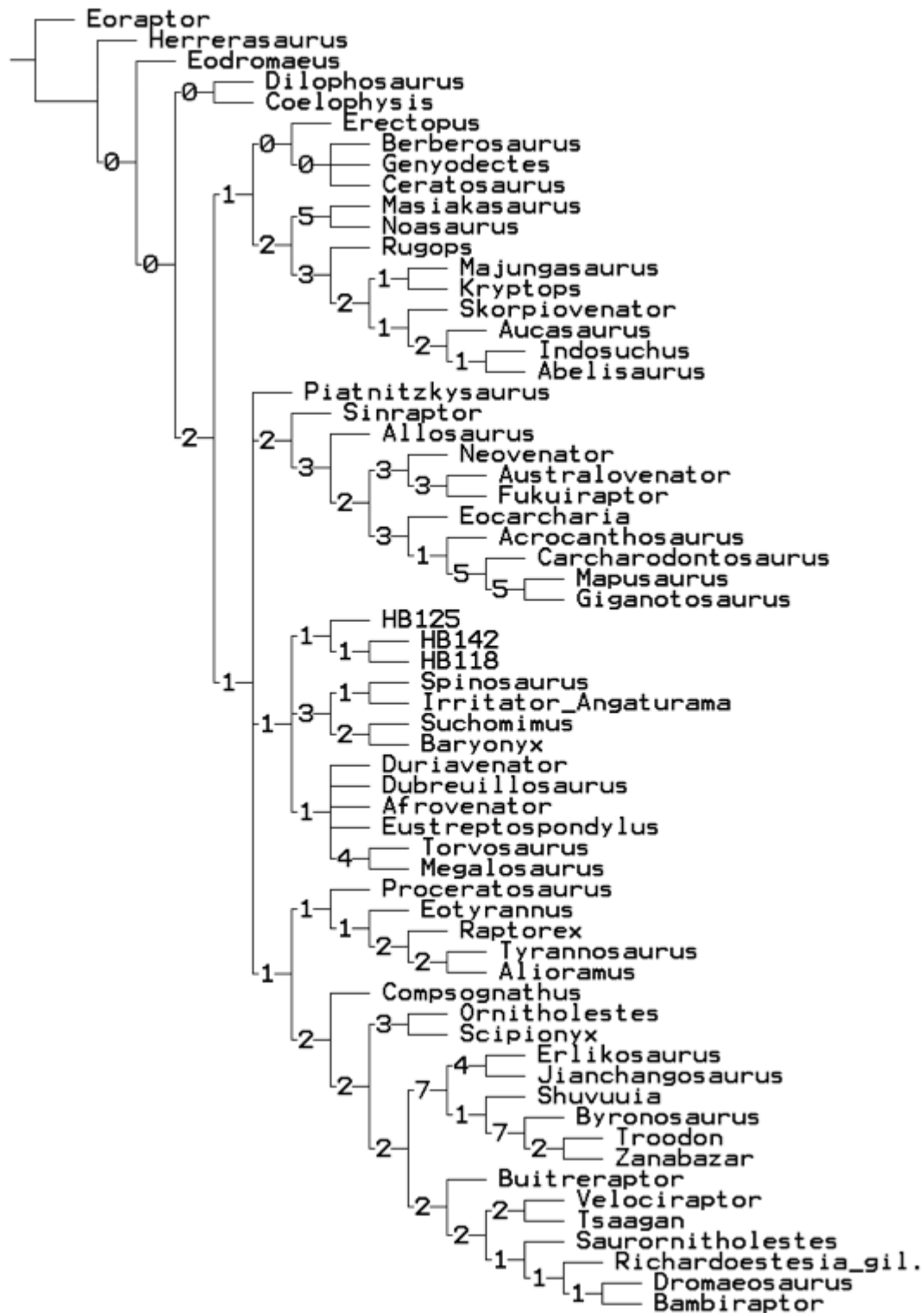
**Figure 2.** Strict consensus cladogram after sixteen most parsimonious trees (CI = 0.341, RI = 0.593) obtained from the supermatrix of 141 discrete characters from Hendrickx & Mateus (2014) with HB-87 included in the analysis.



**Figure 3.** Strict consensus cladogram after seven most parsimonious trees (CI = 0.567, RI = 0.545) obtained from the supermatrix of 1972 discrete characters from Hendrickx & Mateus (2014) with only HB-87 included in the analysis.



**Figure 4.** Strict consensus cladogram after seven most parsimonious trees (CI = 0.565, RI = 0.541) obtained from the supermatrix of 1972 discrete characters from Hendrickx & Mateus (2014) with all HB crowns except HB-87 included in the analysis.



## References

Hendrickx, C. and Mateus, O. 2014. Abelisauridae (Dinosauria: Theropoda) from the Late Jurassic of Portugal and dentition-based phylogeny as a contribution for the identification of isolated theropod teeth. *Zootaxa* 3759 (1): 1–74. <http://dx.doi.org/10.11646/zootaxa.3759.1.1>