

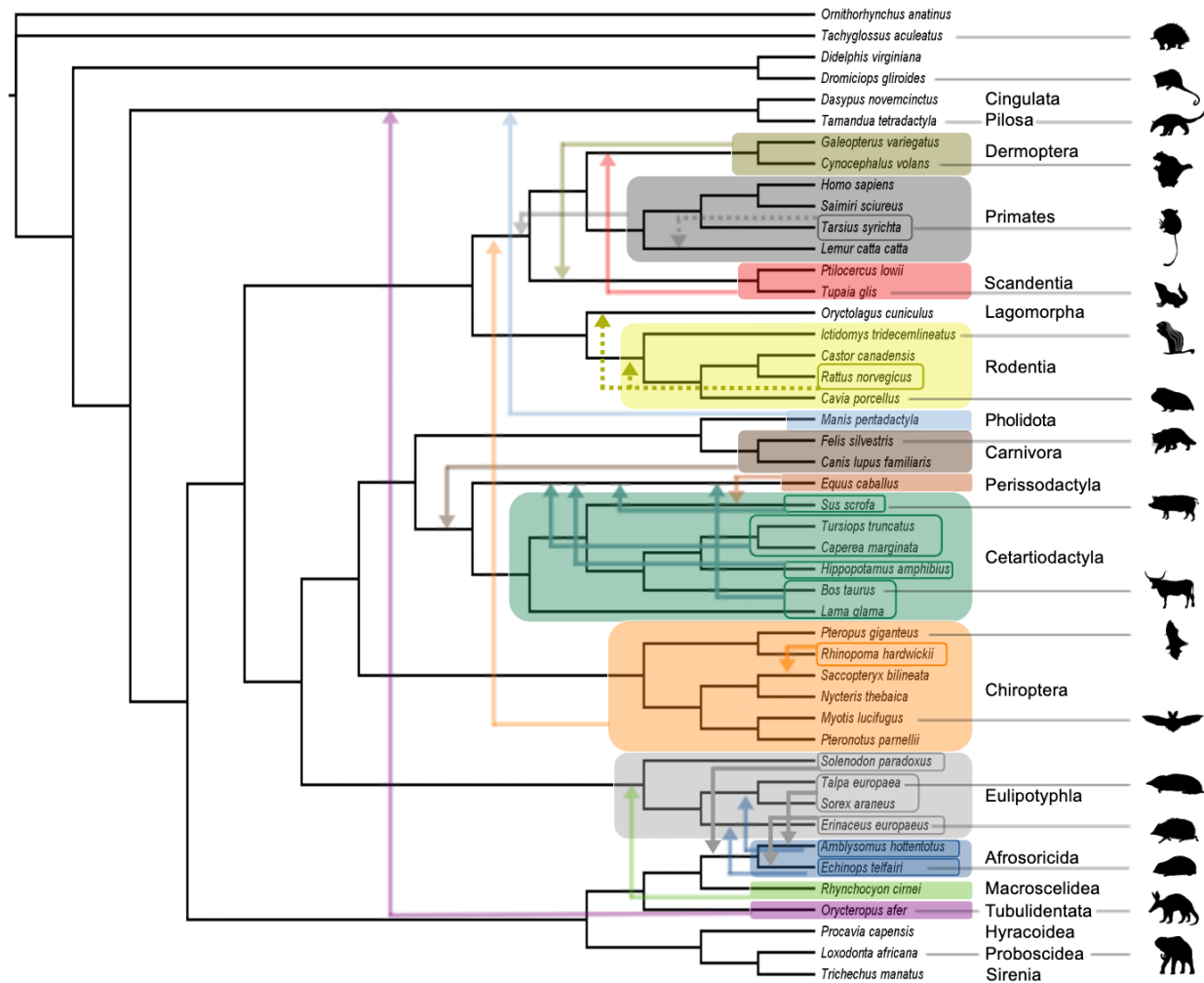


Fig. S1 Summary of pseudoextinction analyses with the ordered data set. The species tree is based on a maximum parsimony analysis that was performed with a molecular scaffold for extant taxa and without any pseudoextinct taxa. Extinct taxa were included in the pseudoextinction analyses, but for clarity were omitted from the figure (see Figshare for trees that include extinct taxa). The ordered data set treated 796 multistate characters from the Velazco et al. (2022) data set as ordered and the remainder of the multistate characters as unordered. Pseudoextinct orders and individual species that were recovered in topological positions that are inconsistent with the molecular scaffold are indicated by arrows. Solid arrows indicate movements that occurred on all MPTs for a pseudoextinct taxon, whereas dashed arrows indicate movements that occurred on some but not all MPTs.