

**Appendix S2. Correlation between PC1 and proximal lobing.** Each leaf ( $n = 2632$ ) is plotted; the color of the point indicates the proximal lobing value. Proximal lobing values are calculated as the ratio of the length of the proximal sinus to the length of the proximal lobe terminus, with values increasing as lobing decreases. The Pearson's correlation coefficient between PC1 and proximal lobing is indicated, as is the amount of variance explained by PC1.

