***New Phytologist* Supporting Information**

Article title: Cradles and museums of generic plant diversity across tropical Africa

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The following Supporting Information is available for this article:

Fig. S1 Relationship between weighted endemism (WE) and genus richness (GR). WE and GR were calculated for each of the 638 sampling units (SUs) using 2 345 tropical African angiosperms genera and the phylogenetic tree. SUs are 100 × 100 km squares. R^2: adjusted R-square resulting from the linear regression of WE on GR.

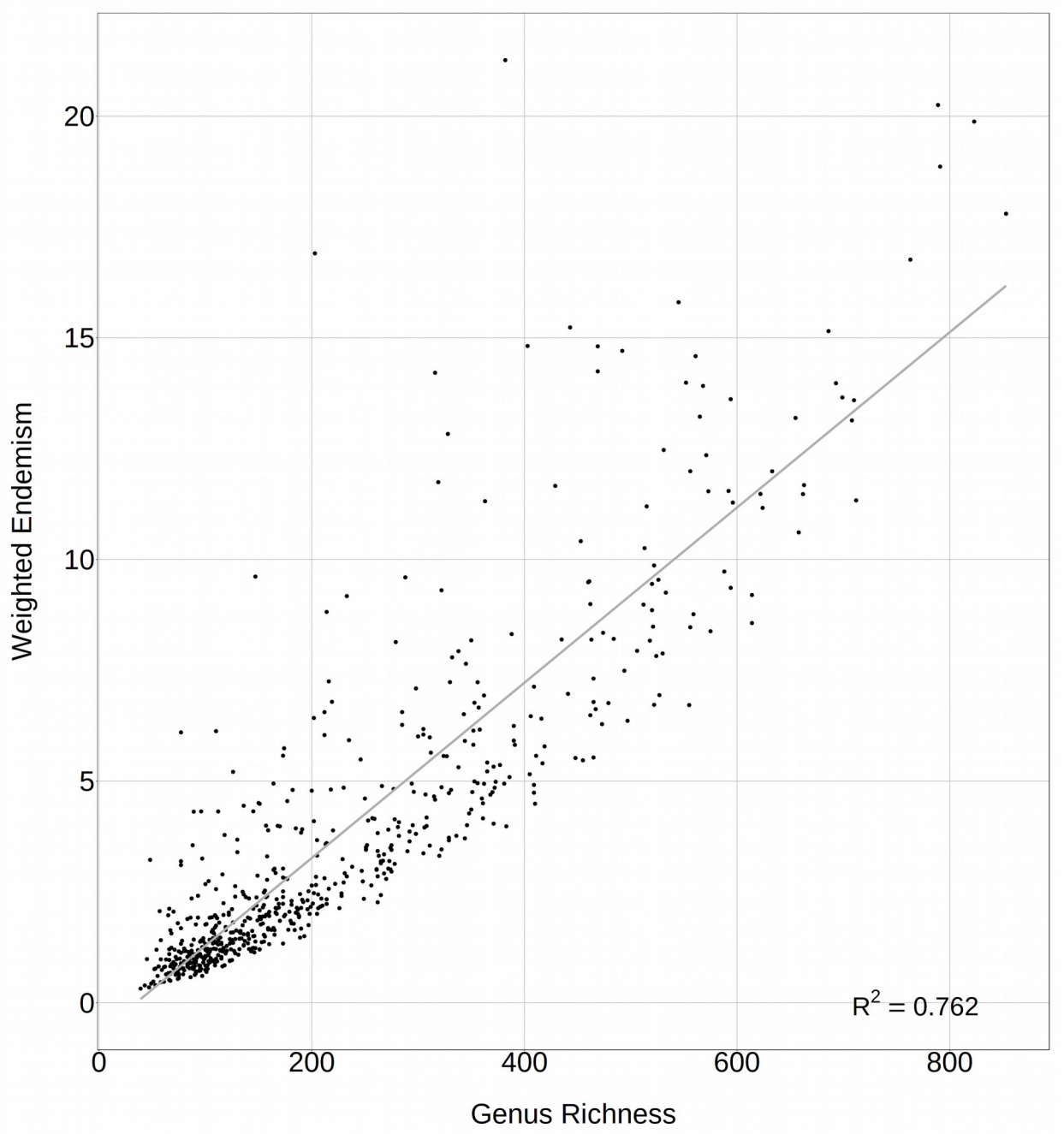

Fig. S2 Relationship between phylogenetic diversity (PD) and genus richness (GR). PD and GR were calculated for each of the 638 sampling units (SUs) using 1 719 tropical African angiosperms genera and the phylogenetic tree. SUs are 100 × 100 km squares. R^2: adjusted R-square resulting from the linear regression of PD on GR.

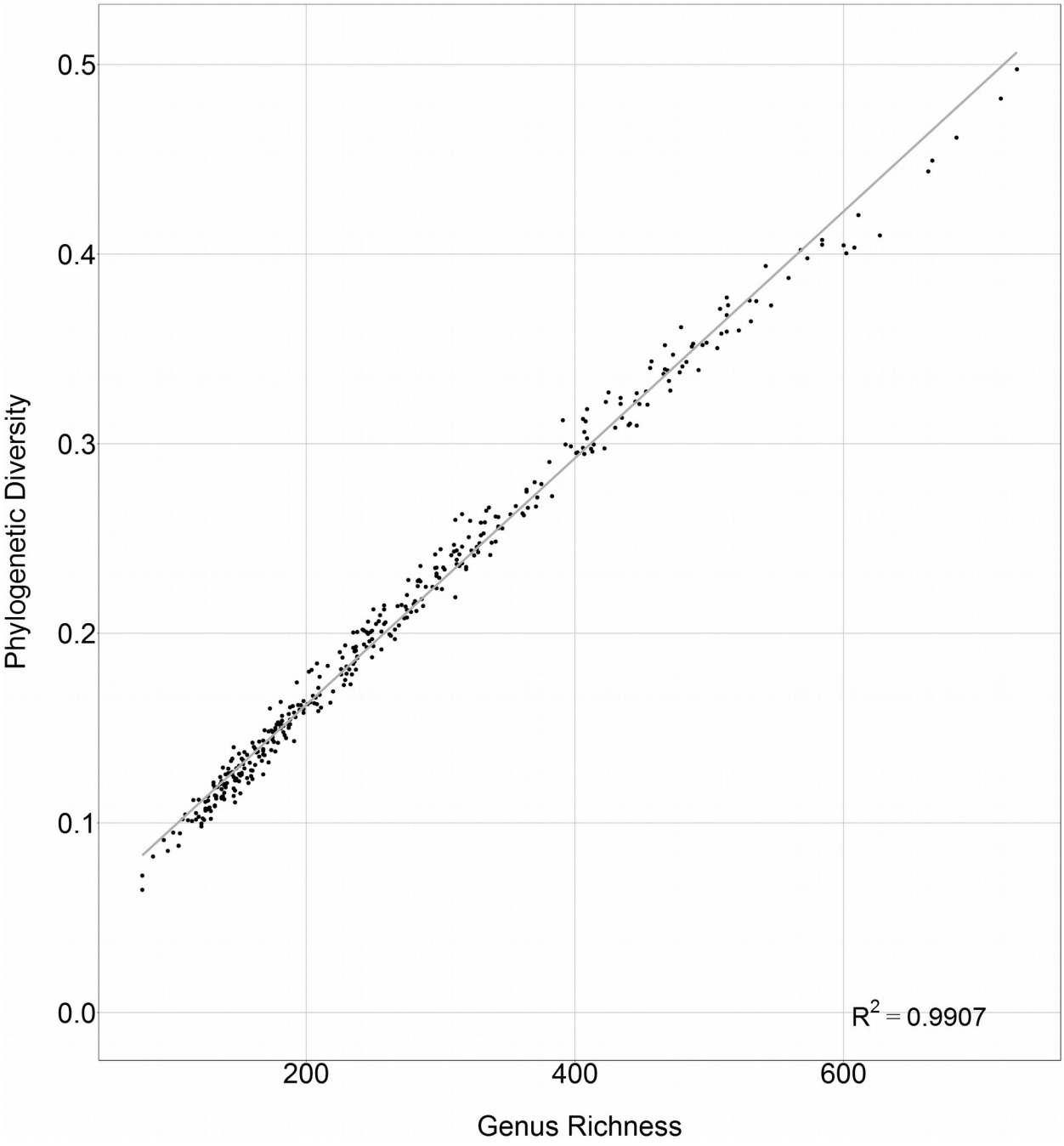

Fig. S3 Map of observed phylogenetic diversity. PD was calculated for each of the 638 sampling units (SUs) using 1 719 tropical African angiosperms genera and the phylogenetic tree. SUs are 100 × 100 km squares. White SUs contain less than 100 records.

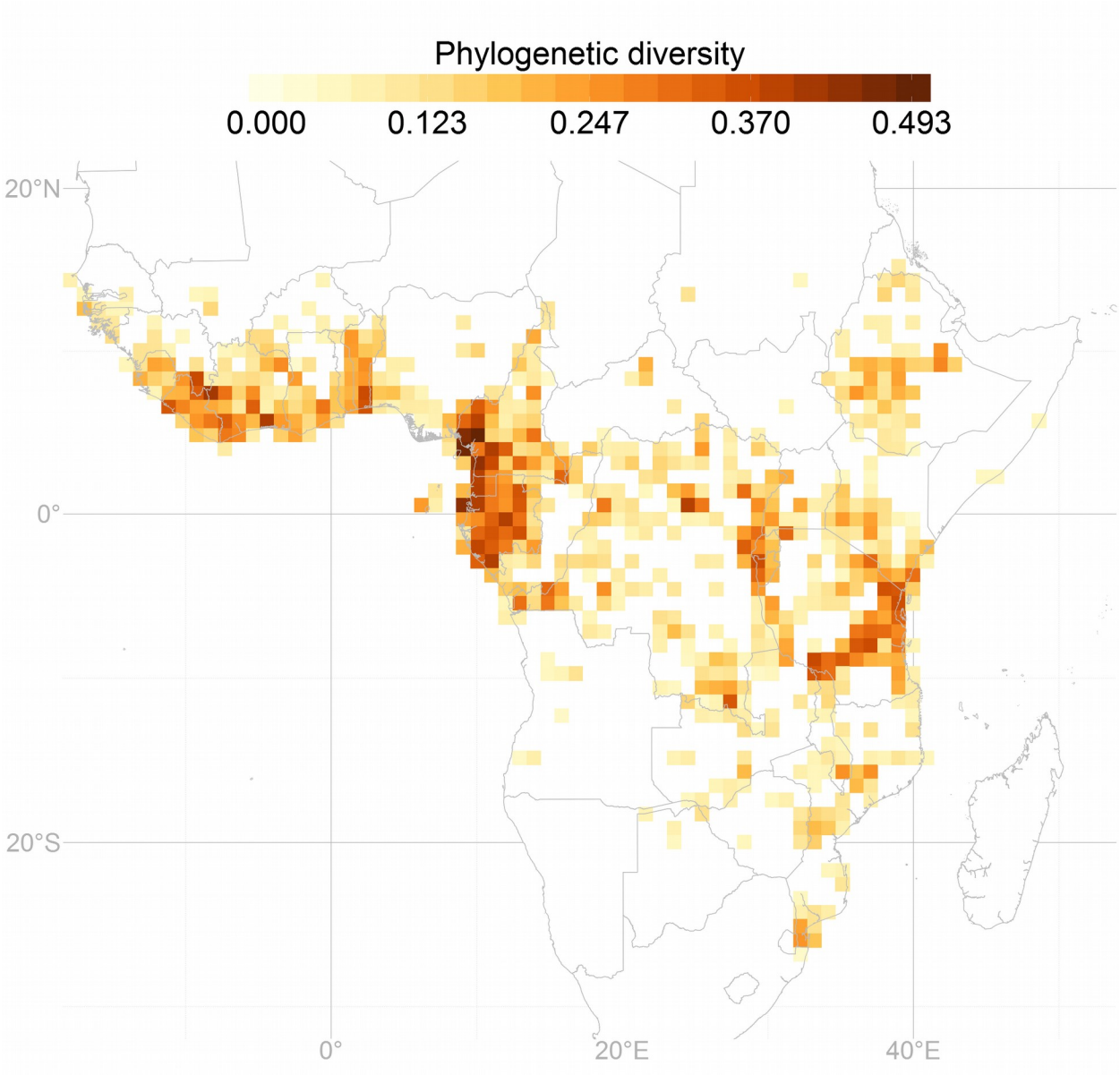

Fig. S4 Boxplot of the distributions of the mean ruggedness (in metres) of the SUs depending on their phylogenetic diversity (PD) significance class. Distributions are different (Kruskal-Wallis test, p-value = 2.87×10-14). Different letters indicates pairwise significant difference (p value < 0.05; pairwise comparison using Wilcoxon test with Holm's correction, see p-values in Table S1). For each box: the bold horizontal line corresponds to the median; the lower and upper bounds of the box correspond to first and third quartiles, respectively; the upper vertical line extends from the upper bound of the box to the highest value of the distribution, no further than 1.5 × IQR (Inter Quartile Range, or the distance between the first and third quartile); the lower vertical line extends from the lower bound of the box to the lowest value of the distribution, no further than 1.5 × IQR; black dots are values beyond IQR ('outlier' values).

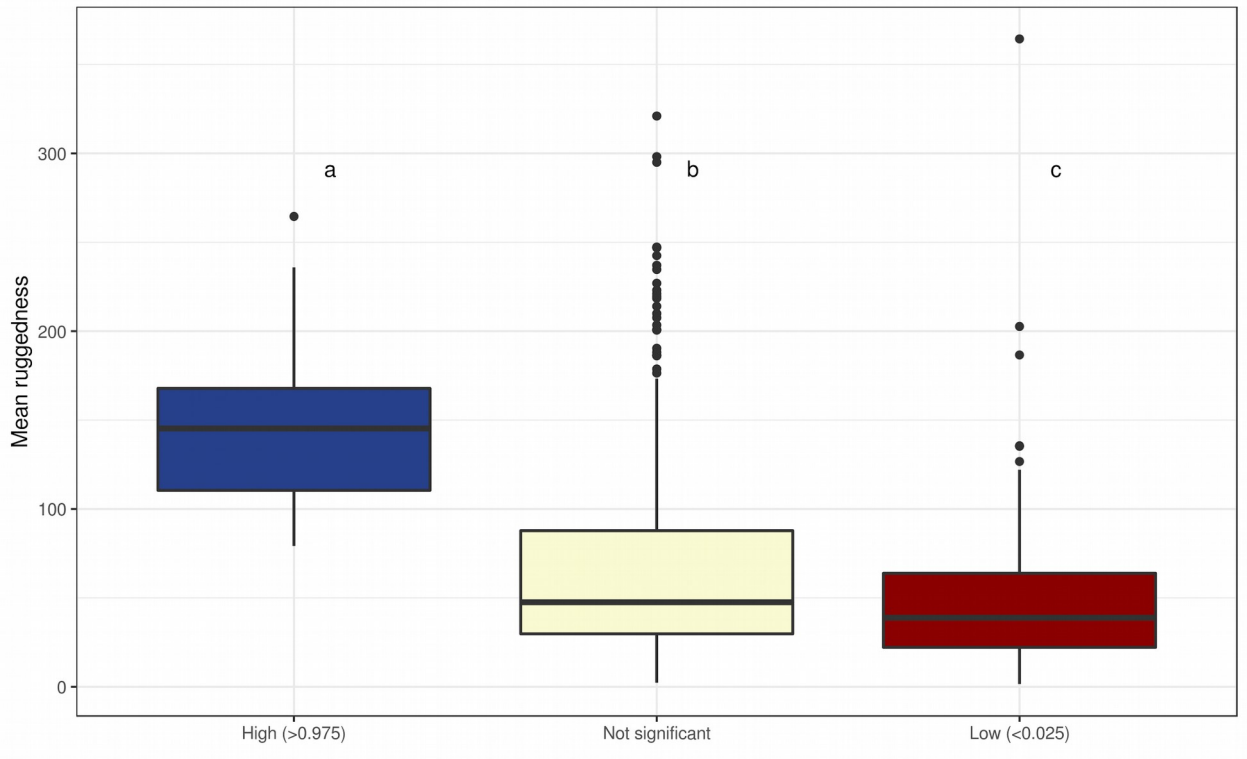

Fig. S5 Relationship between phylogenetic endemism (PE) and weighted endemism (WE). PE and WE were calculated for each of the 638 sampling units (SUs) using 1 719 tropical African angiosperms genera and the phylogenetic tree. SUs are 100 × 100 km squares. R^2: adjusted R-square resulting from the regression of PE on WE.

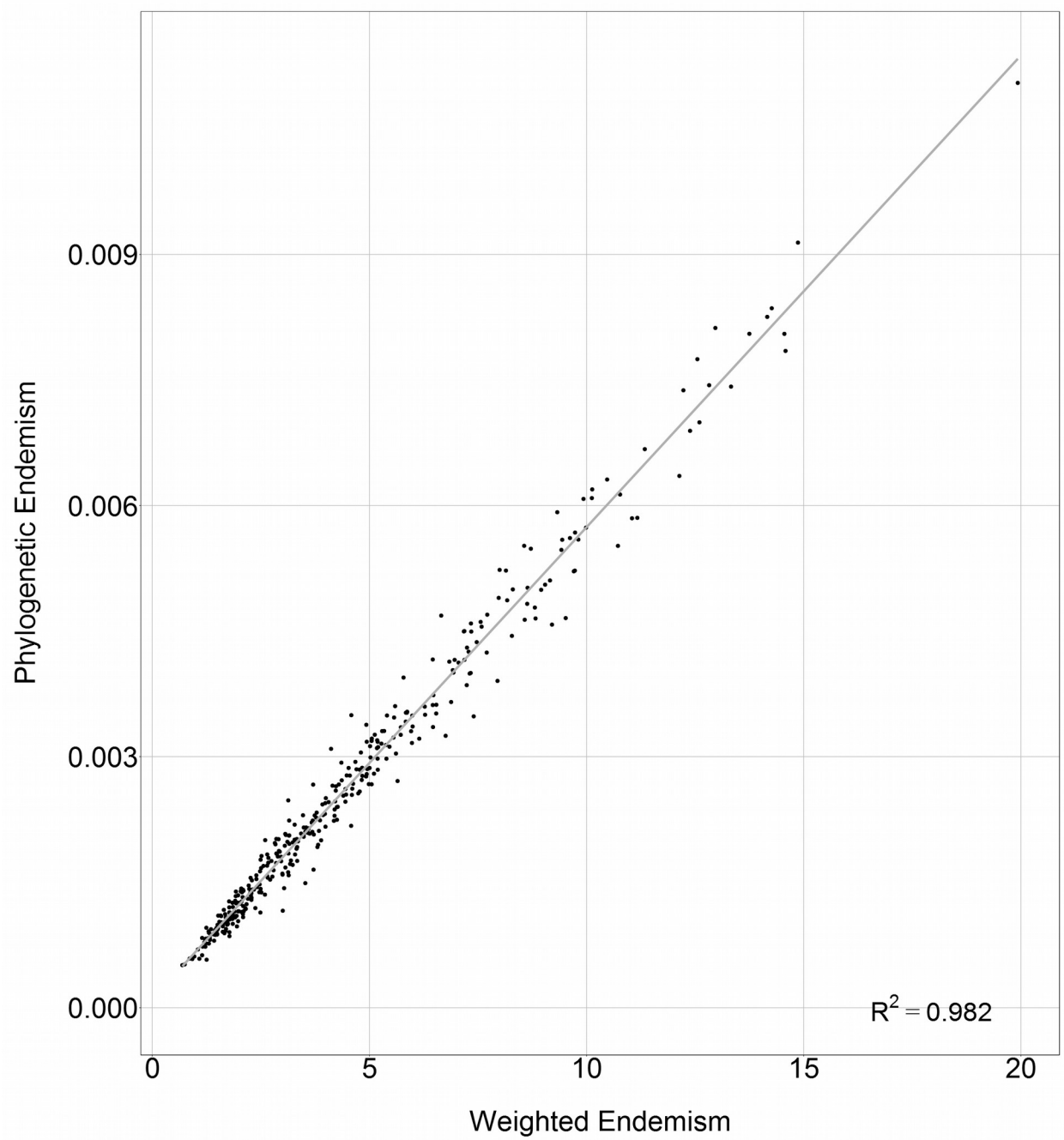

Fig. S6 Maps of phylogenetic endemism: (a) Observed values, (b) Significant values from the randomisation test. PE was calculated for each of the 638 sampling units (SUs) using 1 719 tropical African angiosperms genera and the phylogenetic tree. SUs are 100 × 100 km squares. Red SUs contain less PE than expected; blue SUs contain more PE than expected. Beige SUs are not significant. White SUs contain less than 100 records.

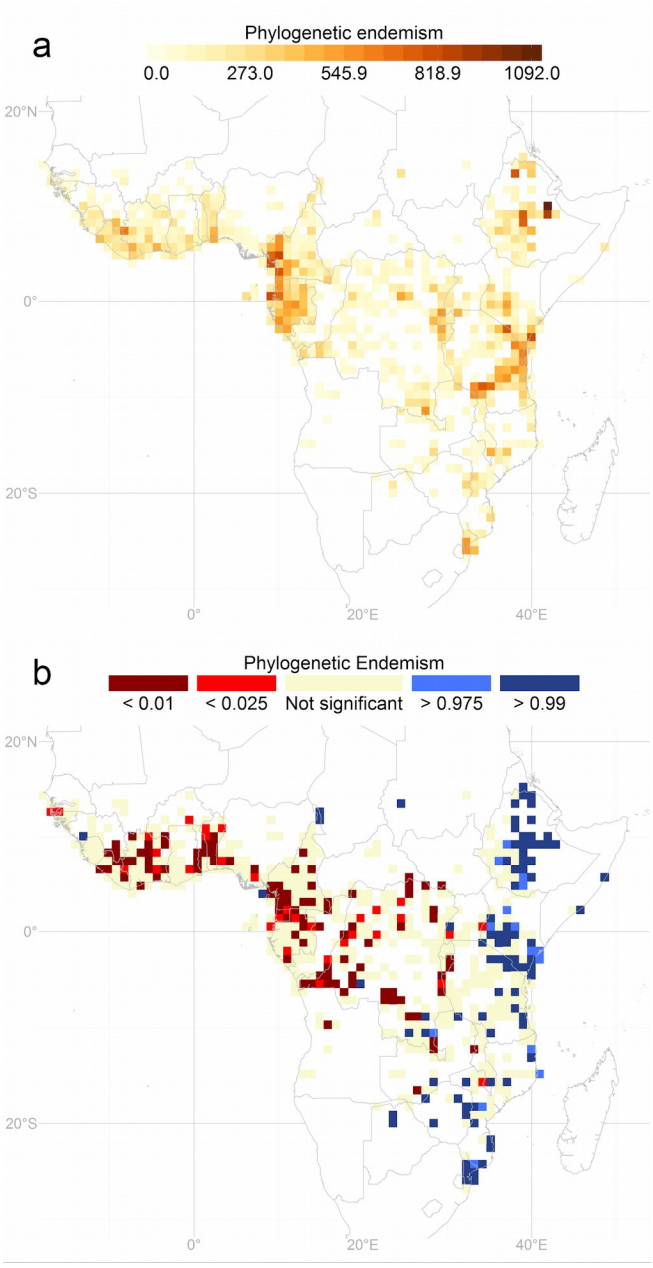

Fig. S7 Maps of CANAPE results with different SU sizes. The 50 × 50 km SUs contain at least 50 occurrences, the 75 × 75 km SUs contain at least 75 occurrences, the 100 × 100 km SUs contain at least 100 occurrences (that is the results interpreted in the main text), the 200 × 200 km SUs contain at least 200 occurrences, and the 300 × 300 km SUs contain at least 300 occurrences.

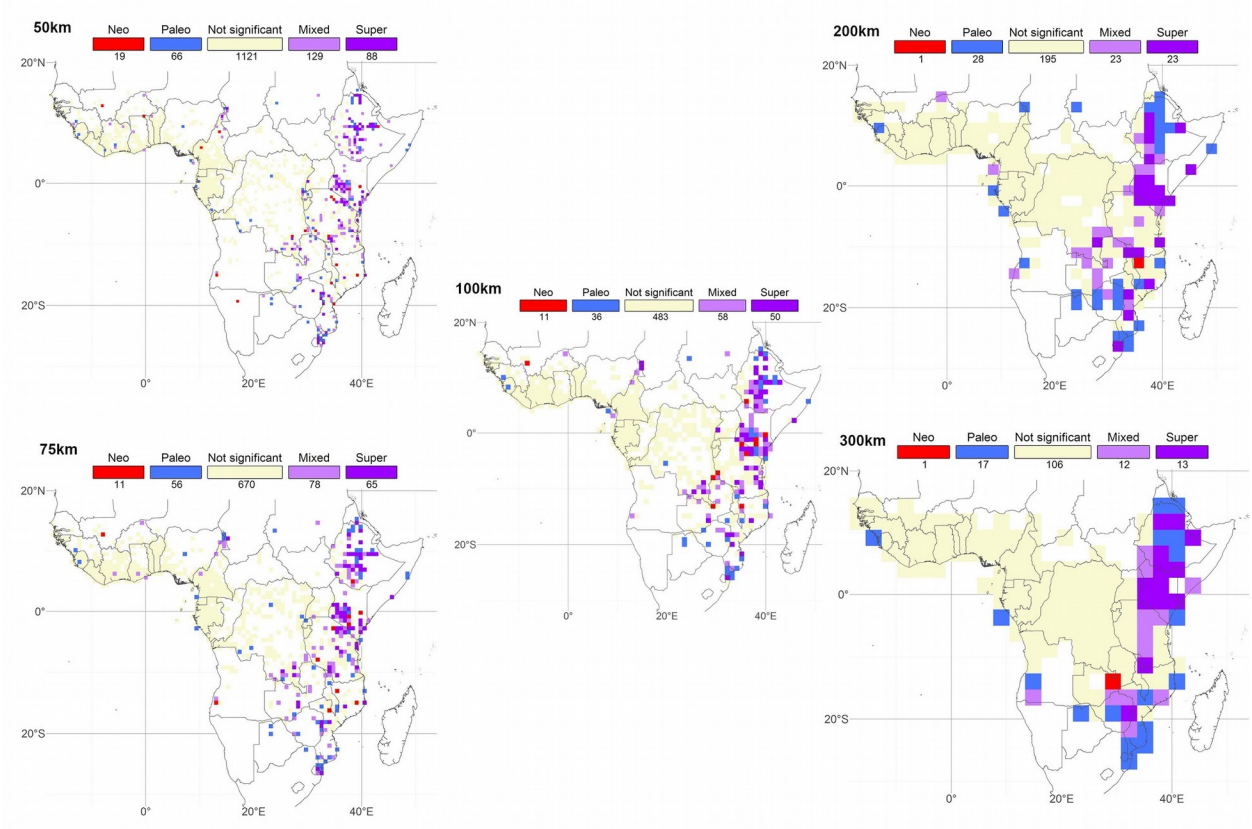

Fig. S8 Boxplot of the distribution of the percentage of montane plots of the sampling units depending on their CANAPE category. Distributions are different (Kruskal-Wallis test, p-value = 1.91×10-12). Different letters indicates pairwise significant difference (p value < 0.05; pairwise comparison using Wilcoxon test with Holm's correction, see p-values in Table S3). For each box: the bold horizontal line corresponds to the median; the lower and upper bounds of the box correspond to first and third quartiles, respectively; the upper vertical line extends from the upper bound of the box to the highest value of the distribution, no further than 1.5 × IQR (Inter Quartile Range, or the distance between the first and third quartile); the lower vertical line extends from the lower bound of the box to the lowest value of the distribution, no further than 1.5 × IQR; black dots are values beyond IQR ('outlier' values).

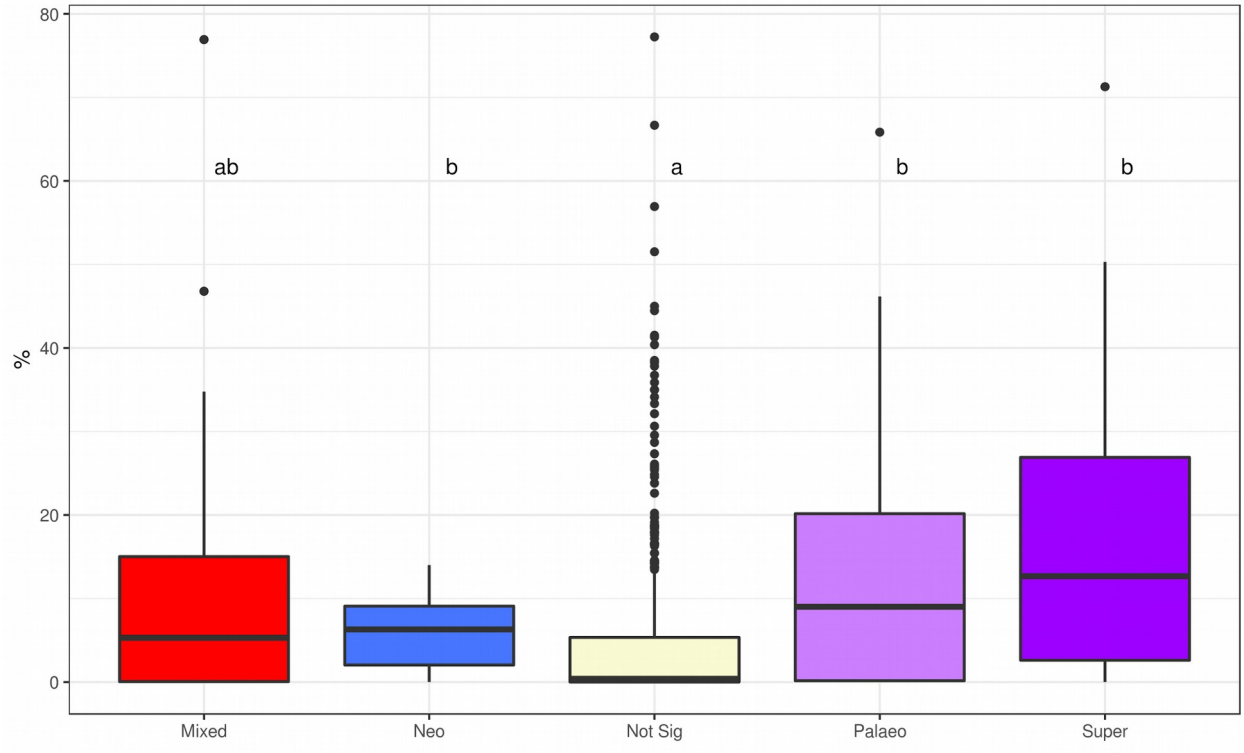

Fig. S9 Boxplot of the distribution of the percentage of overlap of the SUs with 'montane areas' depending on their CANAPE category. Distributions are different (Kruskal-Wallis test, p-value = 1.12×10-9). Different letters indicates pairwise significant difference (p value < 0.05; pairwise comparison using Wilcoxon test with Holm's correction, see p-values in Table S4). For each box: the bold horizontal line corresponds to the median; the lower and upper bounds of the box correspond to first and third quartiles, respectively; the upper vertical line extends from the upper bound of the box to the highest value of the distribution, no further than 1.5 × IQR (Inter Quartile Range, or the distance between the first and third quartile); the lower vertical line extends from the lower bound of the box to the lowest value of the distribution, no further than 1.5 × IQR; black dots are values beyond IQR ('outlier' values).

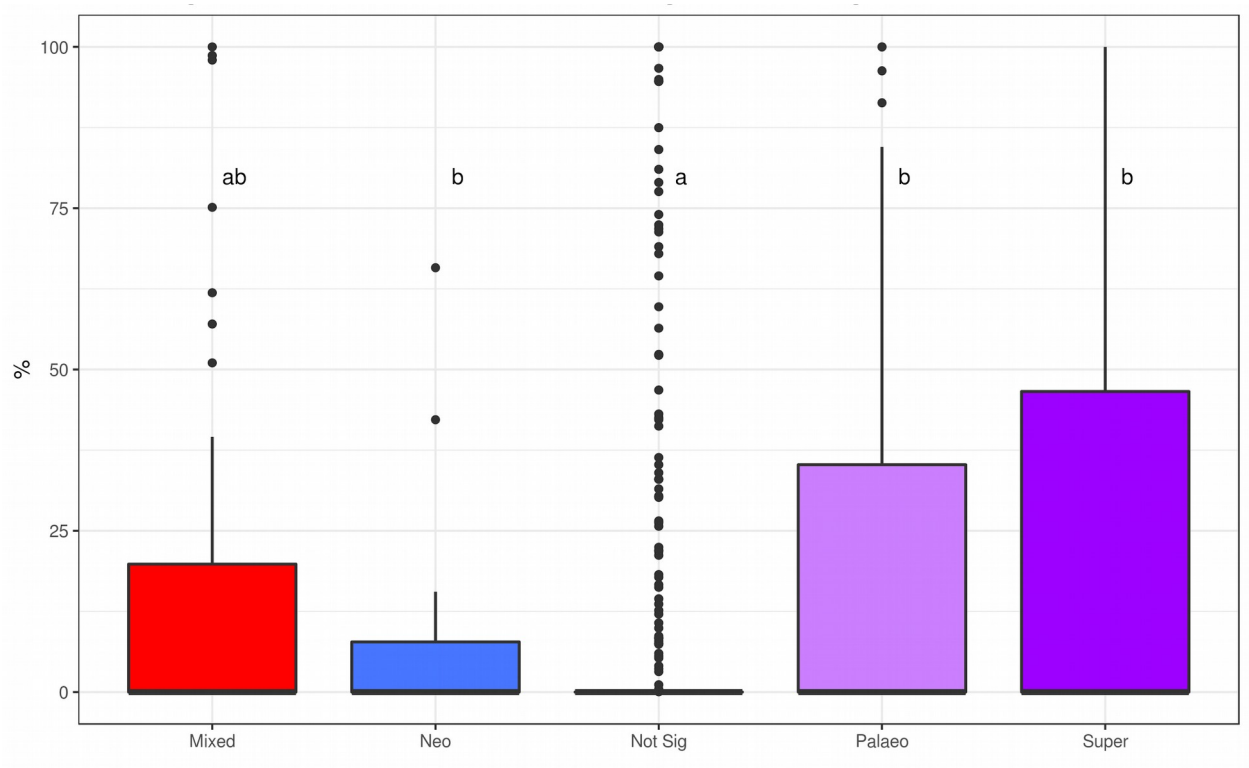

Table S1 P-values resulting from the pairwise comparisons of mean ruggedness per sampling unit in each PD significance class (Wilcoxon test with Holm's correction). See Fig. S5 for boxplot of the distributions.

Mean ruggedness	High PD	Not significant
Not significant	7.2×10-9	-
Low PD	1.2 ×10-12	8.1×10-6

Table S2 P-values resulting from the pairwise comparisons of mean elevation per sampling unit in each RPD significance class. Kruskal-Wallis test rejected the null hypothesis of similar distribution between the three classes (p value = 5.99×10-6). Thus, pairwise comparisons were achieved using Wilcoxon rank sum test with Holm's correction of p-values. See Figure 7 in main text for boxplot of the distributions.

Mean elevation	High RPD	Not significant
Not significant	1.20×10-5	-
Low RPD	0.00045	8.1×10-6

Table S3 P-values resulting from the pairwise comparisons of mean ruggedness per sampling unit in each CANAPE significance class. Kruskal-Wallis test rejected the null hypothesis of similar distribution between the five classes (p-value = 3.51×10-9). Thus, pairwise comparisons were achieved using Wilcoxon rank sum test with Holm's correction of p-values. See Figure 8 in main text for boxplot of the distributions.

	Mixed	Neo	Not significant	Paleo
Neo	1	-	-	-
Not significant	**0.027**	0.369	-	-
Paleo	1	1	0.055	-
Super	0.057	0.240	**9.60×10^{-8}**	0.542

Table S4 P-values resulting from the pairwise comparison of the percentage of montane plots of the sampling units depending on their CANAPE category (Wilcoxon test with Holm's correction). See boxplot on Fig. S8 for boxplots of the distributions.

	Mixed	**Neo**	**Not Significant**	**Paleo**
Neo	1			
Not Significant	**0.002**	0.143		
Paleo	1	1	**0.004**	-
Super	0.057	0.465	**1.10×10^{-9}**	0.561

Table S5 P-values resulting from the pairwise comparison of the distribution of the percentage of overlap of the SUs with 'montane areas' depending on their CANAPE category (Wilcoxon test with Holm's correction). See boxplot on Fig. S9 for boxplot of the distributions.

	Mixed	Neo	Not significant	Paleo
Neo	1	-	-	-
Not significant	**4.2×10^{-4}**	1	-	-
Paleo	1	1	**1.22×10^{-3}**	-
Super	0.811	1	**1.10×10^{-9}**	1

Table S6 Number of significant CANAPE SUs overlaid by at least one protected area (all protected areas or only Ia, Ib or II types)

	Neo	Paleo	Mixed	Super	All	% of the total (155) significant CANAPE SUs
All PAs	9	30	52	42	133	85.81
Ia, Ib, II PAs	5	12	26	23	66	42.58

Table S7 Surface intersection (in m^2) between significant CANAPE SUs and protected areas (all protected areas or only Ia, Ib or II types)

	Neo	Paleo	Mixed	Super	All	% of the 155 SUs surface
All PAs	2.49×10^{10}	5.67×10^{10}	1.04×10^{11}	1.04×10^{11}	2.89×10^{11}	18.66
Ia, Ib, II PAs	1.15×10^{10}	1.56×10^{10}	3.75×10^{10}	2.72×10^{10}	9.18×10^{10}	5.92