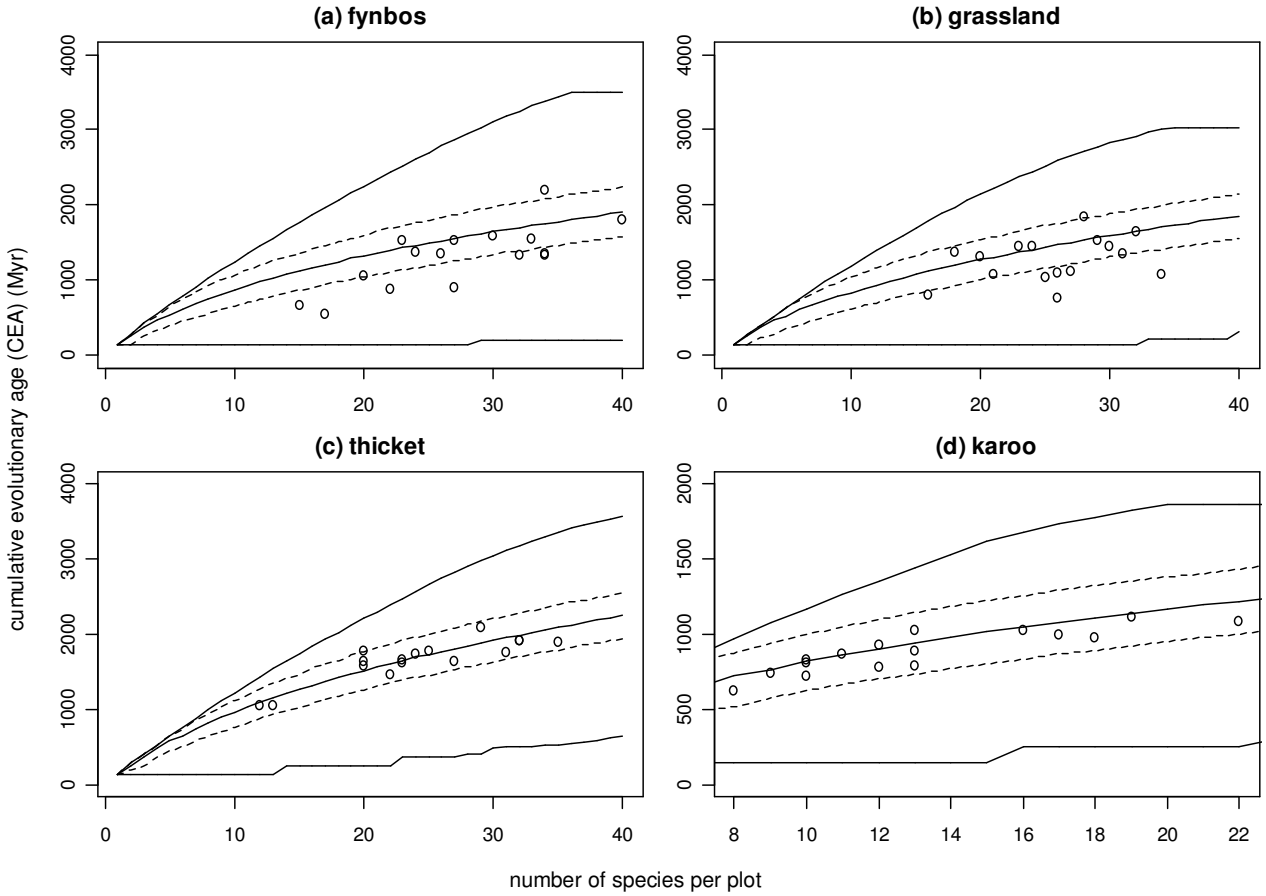
ELECTRONIC SUPPLEMENTARY MATERIAL

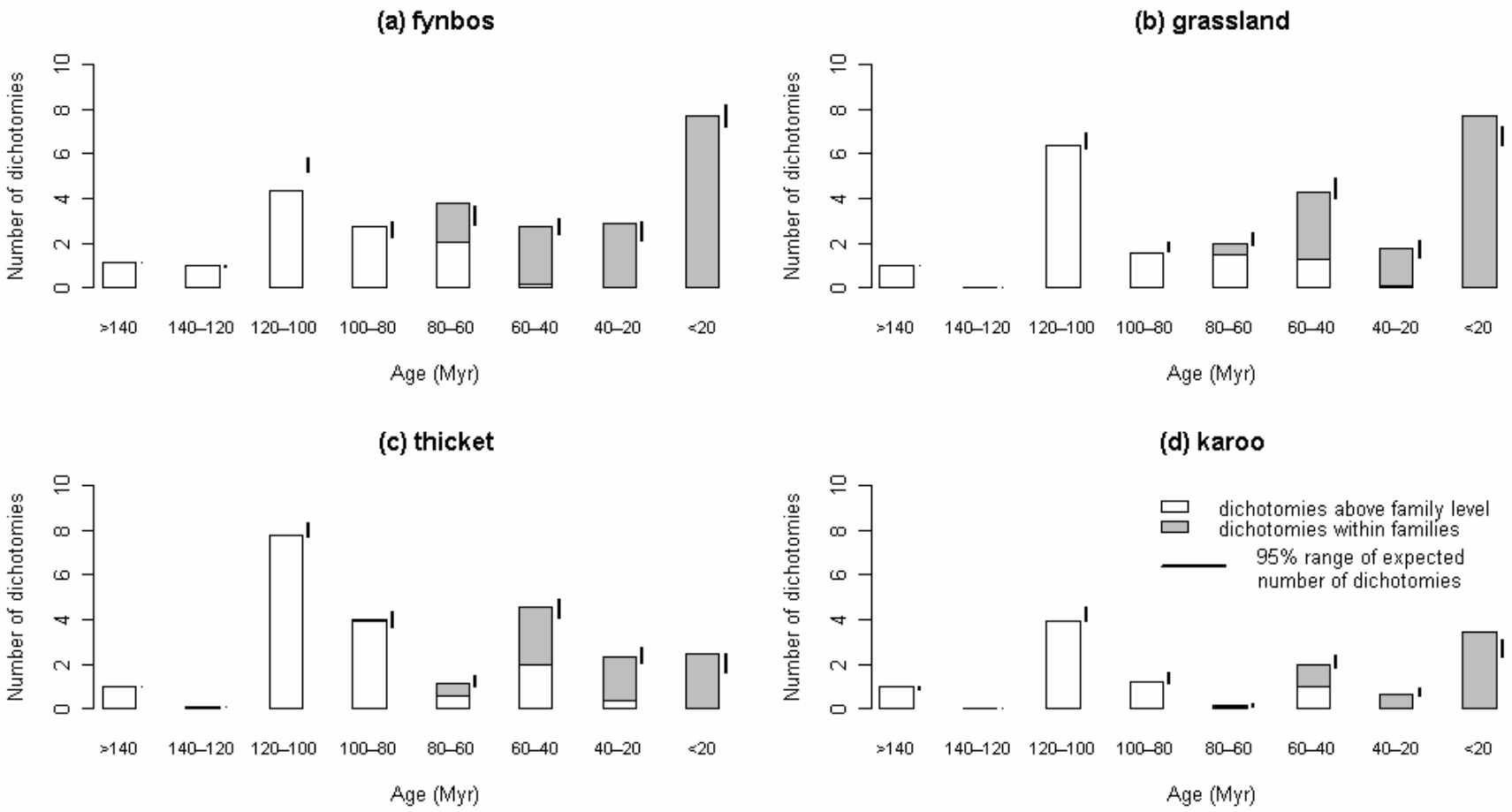
Supplementary Figure 1. The relationship between the number of species in a plot and cumulative evolutionary age (CEA). The upper and lower lines are the minimum and maximum CEA for a given number of species. The middle line is the median CEA and the dotted lines are the 95% Confidence Intervals, calculated by randomly sampling the species list for each vegetation type. Karoo data (fewer species) are plotted on a different scale.

Supplementary Figure 2. Histograms of the age of dichotomies observed in each vegetation plot (mean numbers of dichotomies for a given age interval are presented; 16 plots per vegetation type). The 95% range of expected number of dichotomies was calculated by keeping species occupancy constant, and varying the number of species per plot ('SIM2', Gotelli 2000). The expected ranges are virtually identical to those in figure 2 from the main body of the manuscript ('SIM9', Gotelli 2000).

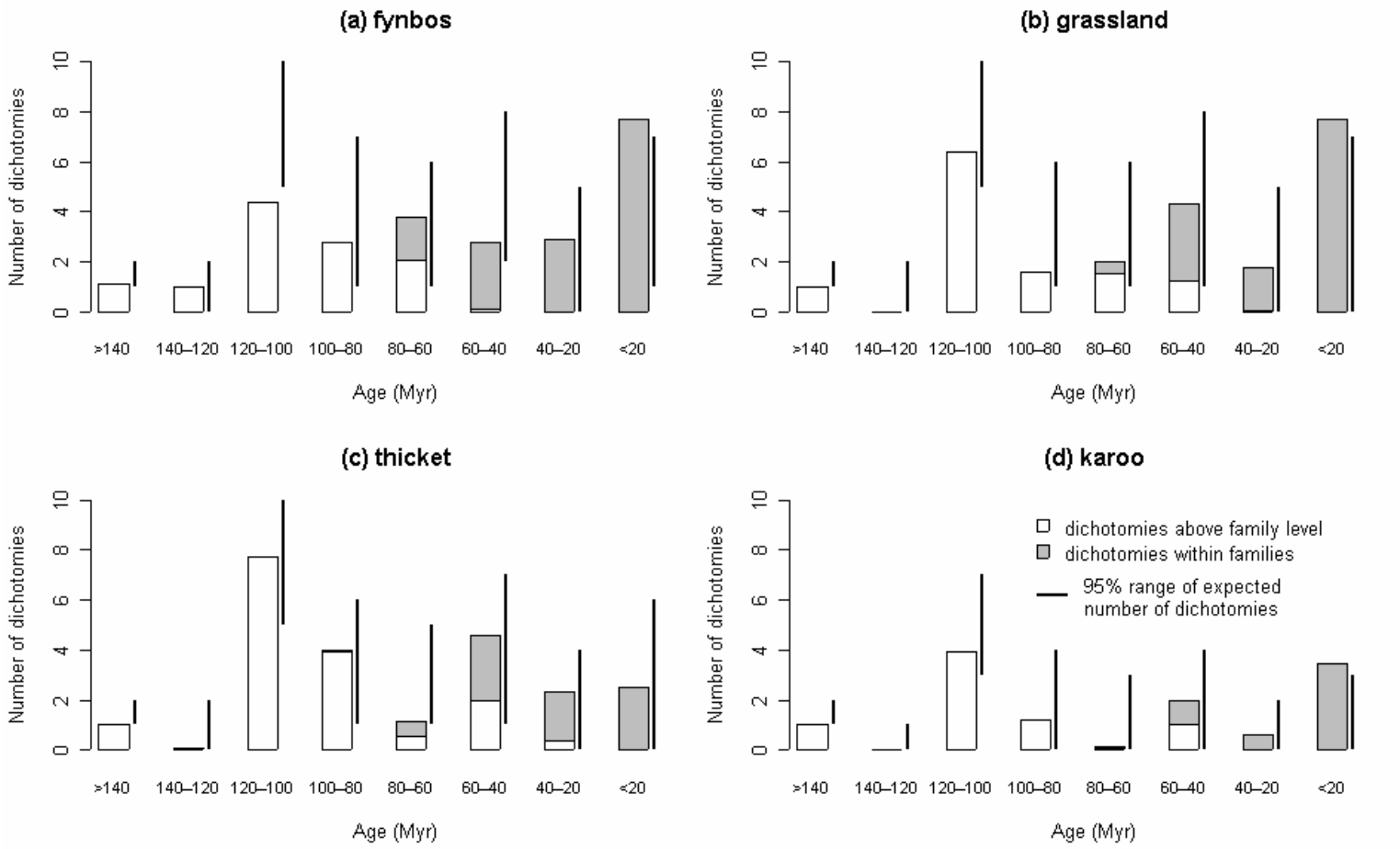
Supplementary Figure 3. Histograms of the age of dichotomies observed in each vegetation plot (mean numbers of dichotomies for a given age interval are presented; 16 plots per vegetation type). The 95% range of expected number of dichotomies was calculated by keeping the number of species per plot constant, and varying species occupancy ('SIM3', Gotelli 2000). The expected ranges are a lot broader than in figure 2 ('SIM9', Gotelli 2000); additionally, in fynbos the observed value for the last 20 Myr interval is now significantly higher than expected. Te high expected values under 'SIM2' and 'SIM9' have to do with the fact that recently diversified (last 20 Myr) fynbos plants are often locally common (high occupancy).



Supplementary Figure 1.



Supplementary Figure 2.



Supplementary Figure 3.