Figures

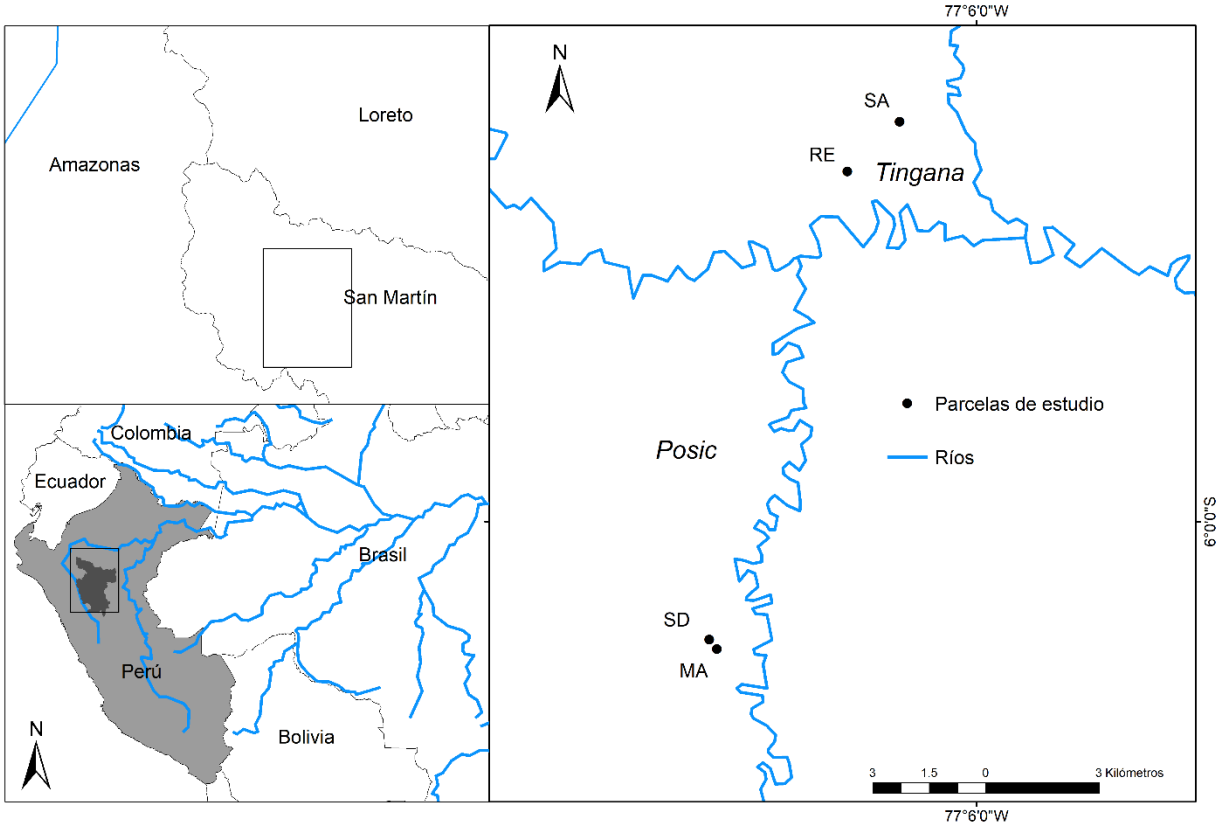


Figure 1. Geographical position of the palm swamp forests, located in Tingana and Posic, with sampled plots. Legend: SA and RE plots in Tingana; SD and MA plots in Posic.

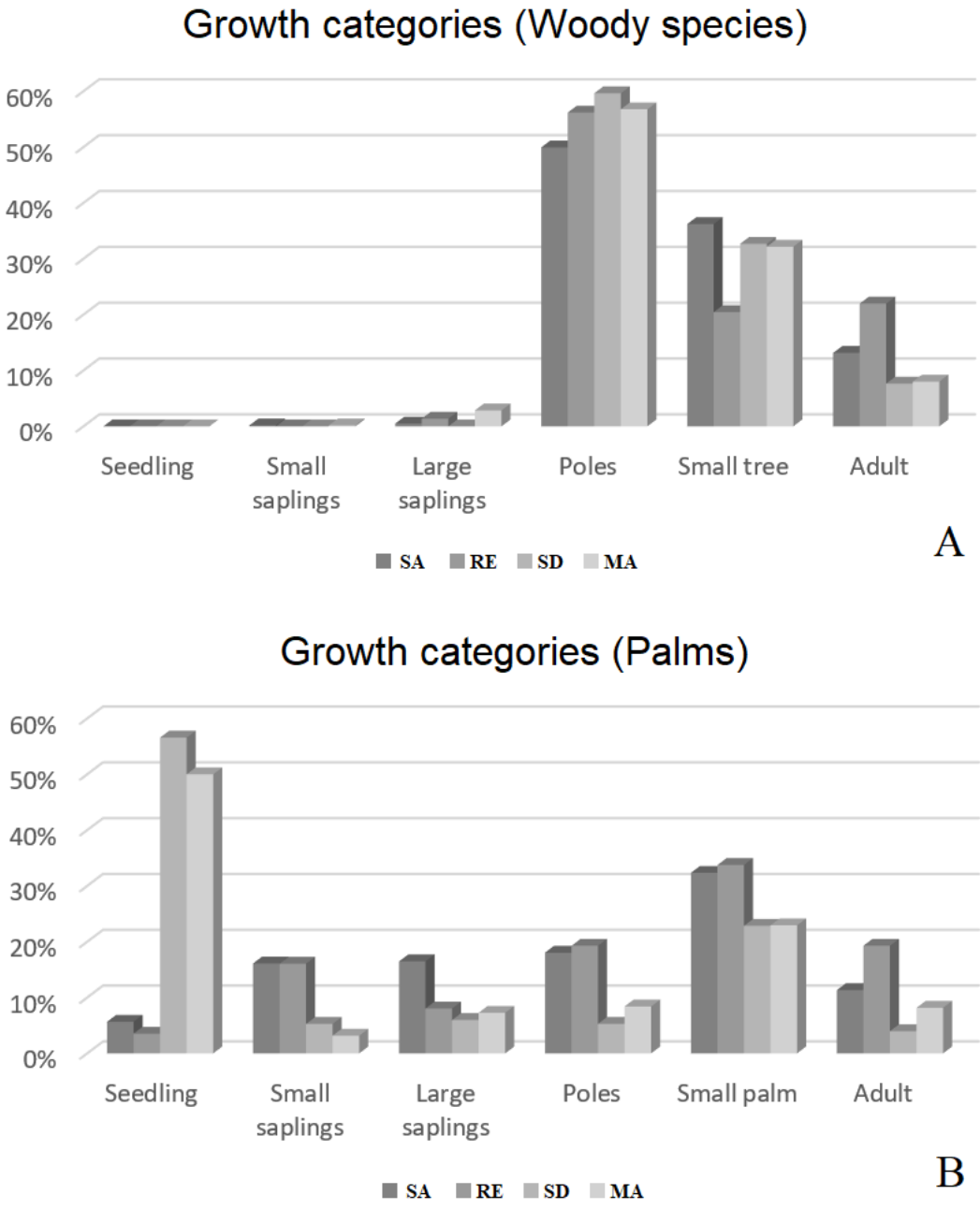


Figure 2. Growth categories (A) woody species and (B) palm species by sites.

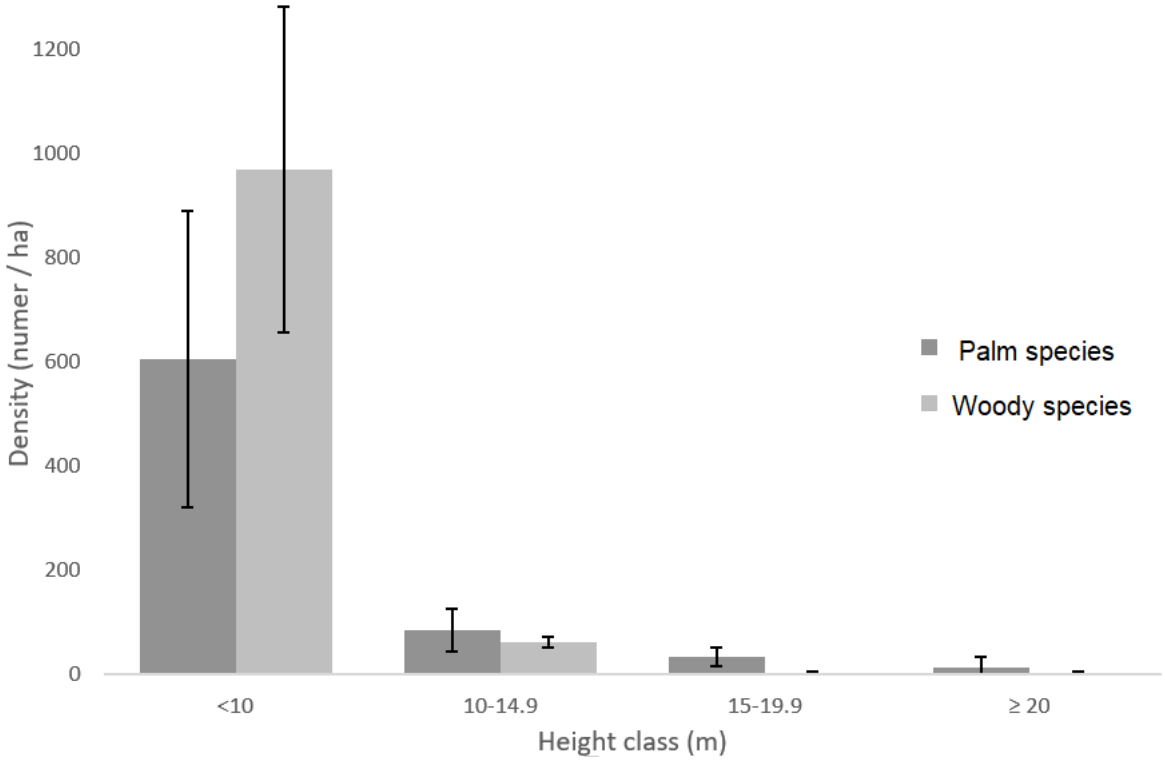


Figure 3. Mean density (± SE) of palm and woody stem among height classes.

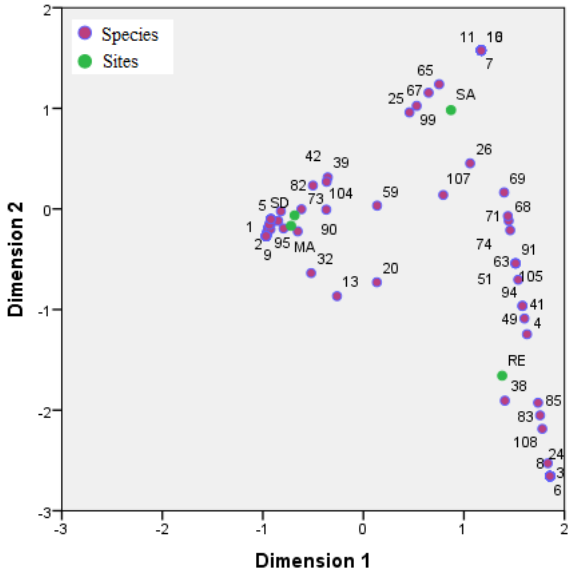


Figure 4A. Correspondence analysis (CA): ordering diagram of the sites (1 to 4) and species (1 to 112) in the Alto Mayo Valley (AMV), Peru.

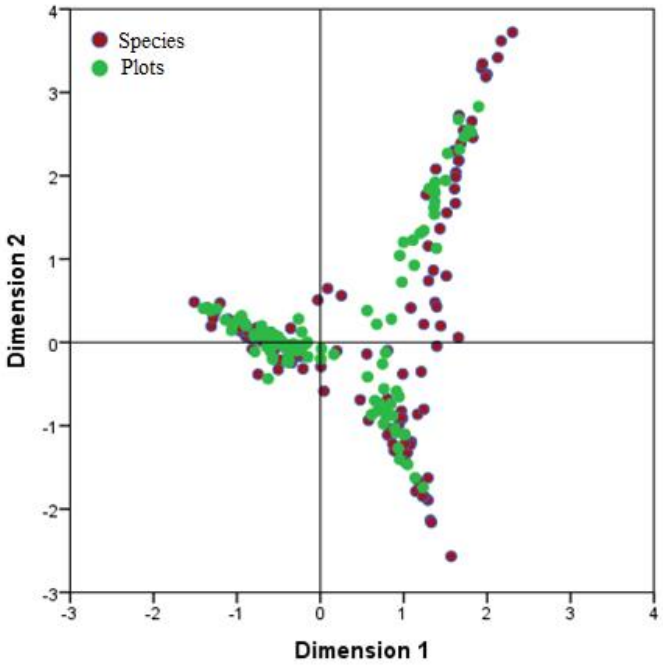
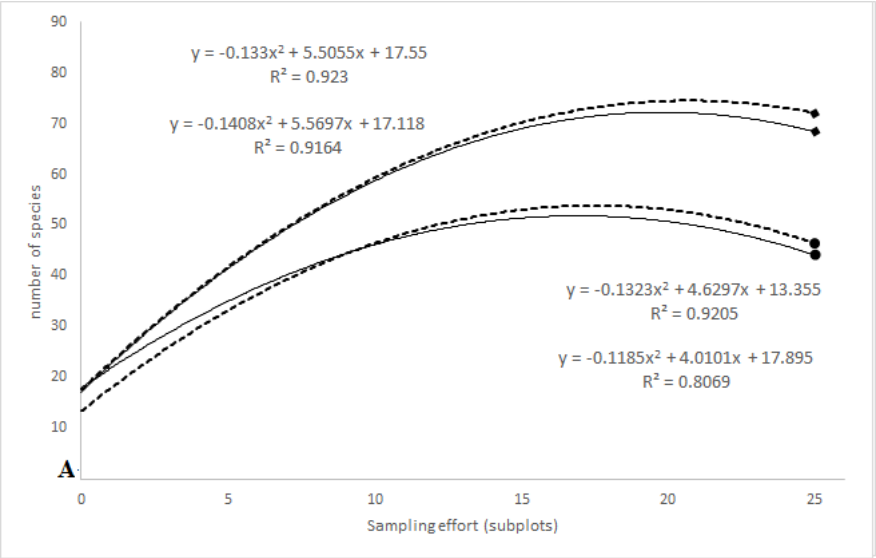


Figure 4B. Correspondence analysis (CA): ordering diagram of the plots (1 to 100) and species (1 to 112) in the Alto Mayo Valley (AMV), Peru.



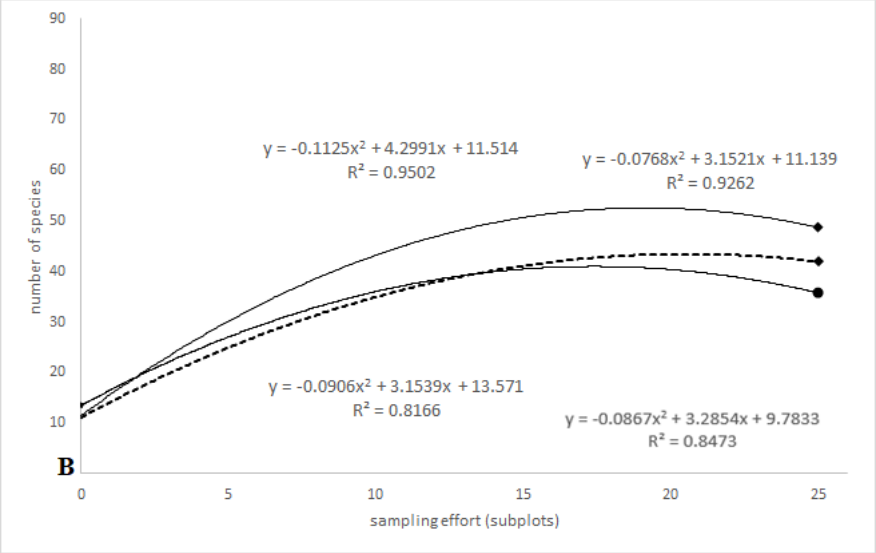


Figure 5. Polynomial adjustment curves (species accumulation; $p < 0.05$) is a function of 25 plots of sampling effort, with continuous and broken lines corresponding to Chao1 and ACE index, respectively. (A) The diamond at the end of the line refers to SA site while the circle does to RE site. (B) Circles at the end of the line represent a MA site and diamonds refer to SD site.

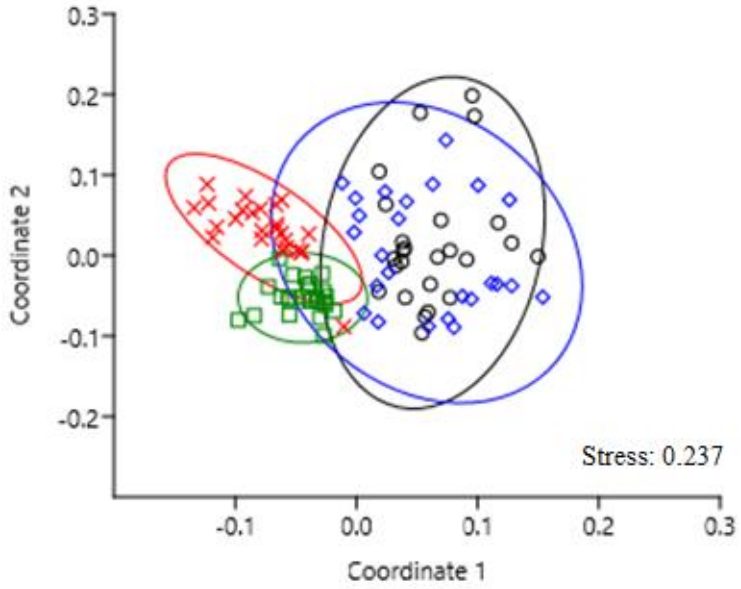


Figure 6. Nonmetric multidimensional scaling (NMDS) ordination of the 100 inventory plots based on abundance data. Green = SA plots, Red = RE plots, Black = SD plots and Blue = MA plots. Ellipses show 95% confidence interval around the group centroids, based on the standard deviations of point scores. The P-value is based on 999 permutations, where the ordination scores were randomly assigned to the groups.


A


B


C


D

Figure 7. Plots monitored in the Alto Mayo Valley (AMV)

. (A) Dominance of *M. flexuosa* in the SA community, (B) Regeneration of *M. flexuosa* individuals in SA community, (C) *C. trinervia* and *F. trigona* in RE community, (D) Illustration of change in land use: rice crops in Posic, (E) *M. flexuosa* leaves and bunches remains in SD plot.