

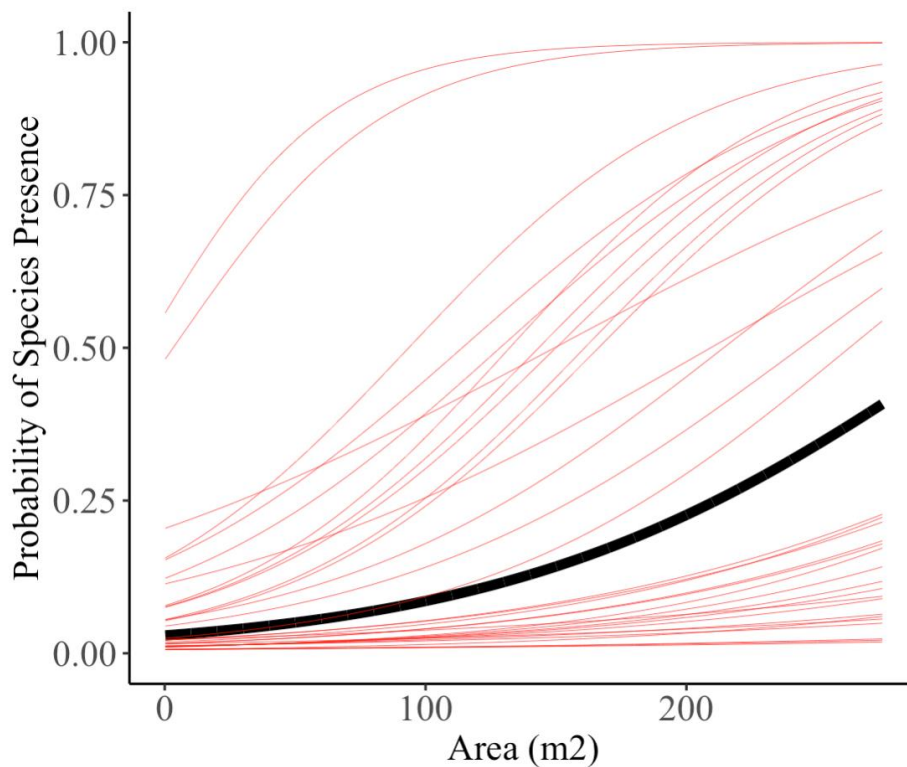


Figure S1. Changes in the probability of woody plant species being present within vegetation patches of different areas at La Soledad grove. The black line represents change in average species presence probability across area and the red lines represent individual species responses across area. The probability of finding the average species increased significantly across area (logit-scale gradient=0.01140, Binomial GLMM, $z=-11.684$, $p<2e-16$). Variance in species-specific slopes ($5.007e-5$) was significant (likelihood ratio test, $\chi^2 = 28.876$, $df=2$, $p=5.365e-7$).

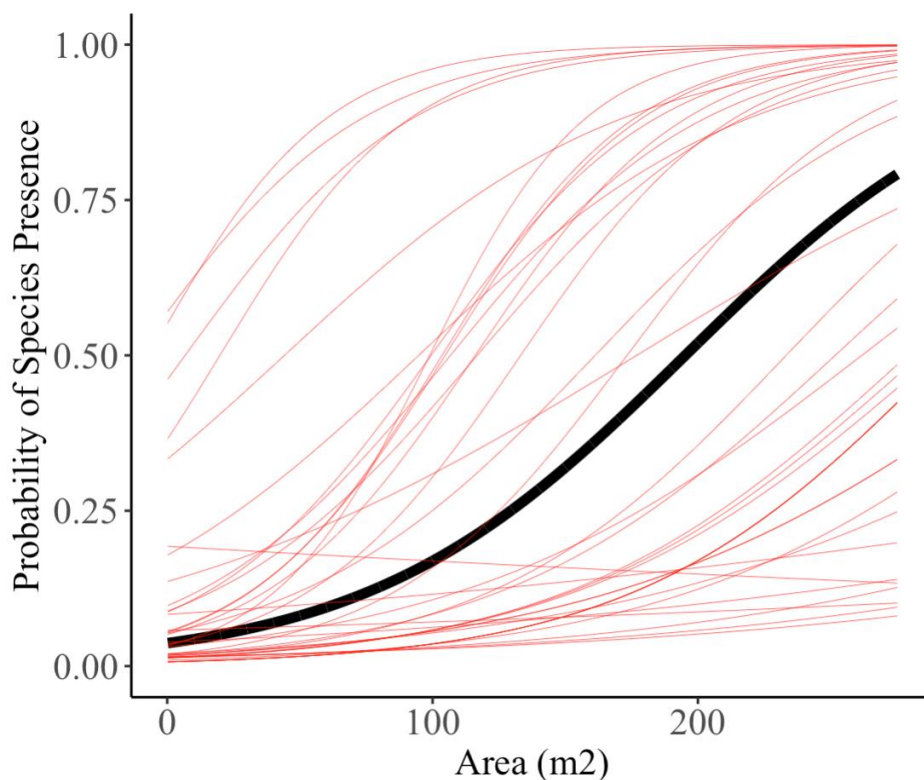


Figure S2. Changes in the probability of woody plant species being present within vegetation patches of different areas at Las Niñas grove. The black line represents change in average species presence probability across area and the red lines represent individual species responses across area. The probability of finding the average species increased significantly across area (logit scale gradient=0.01671, Binomial GLMM, $z=22.41$, $p<2e-16$). Variance in species-specific slopes ($1.233e-4$) was significant (likelihood ratio test, $\chi^2 = 26.014$, $df=2$, $p=2.245e-6$).

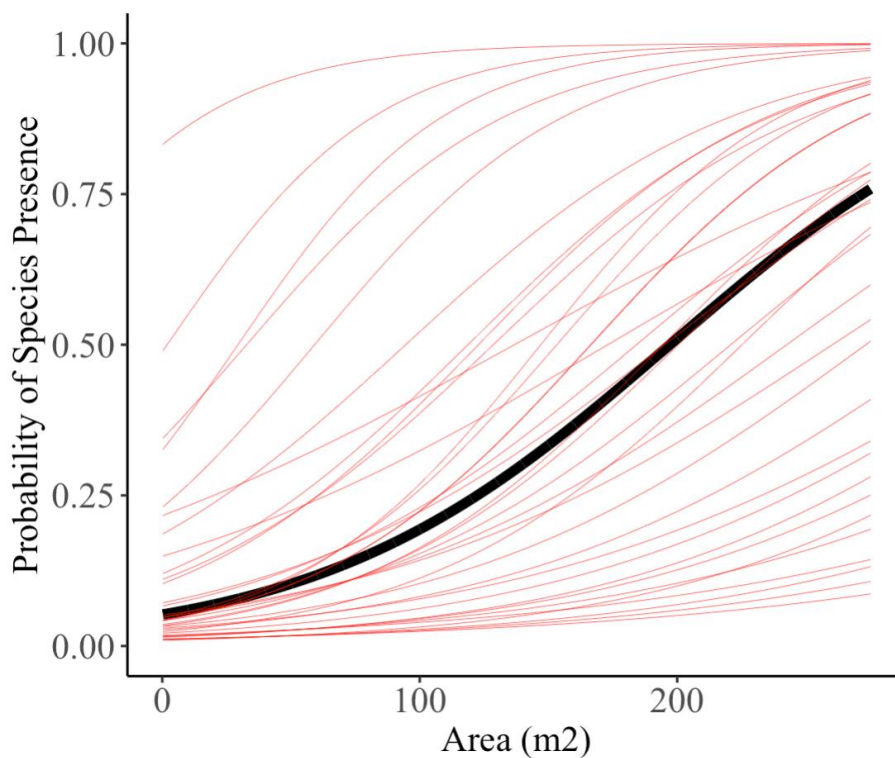


Figure S3. Changes in the probability of woody plant species being present within vegetation patches of different areas at Piquín grove. The black line represents change in average species presence probability across area and the red lines represent individual species responses across area. The probability of finding the average species increased significantly across area (logit scale gradient=0.01470, Binomial GLMM, $z=5.683$, $p=2.6\text{e-}16$). Variance in species-specific slopes ($4.404\text{e-}5$) was significant (likelihood ratio test, $\chi^2 = 9.9047$, $df=2$, $p=0.007067$).