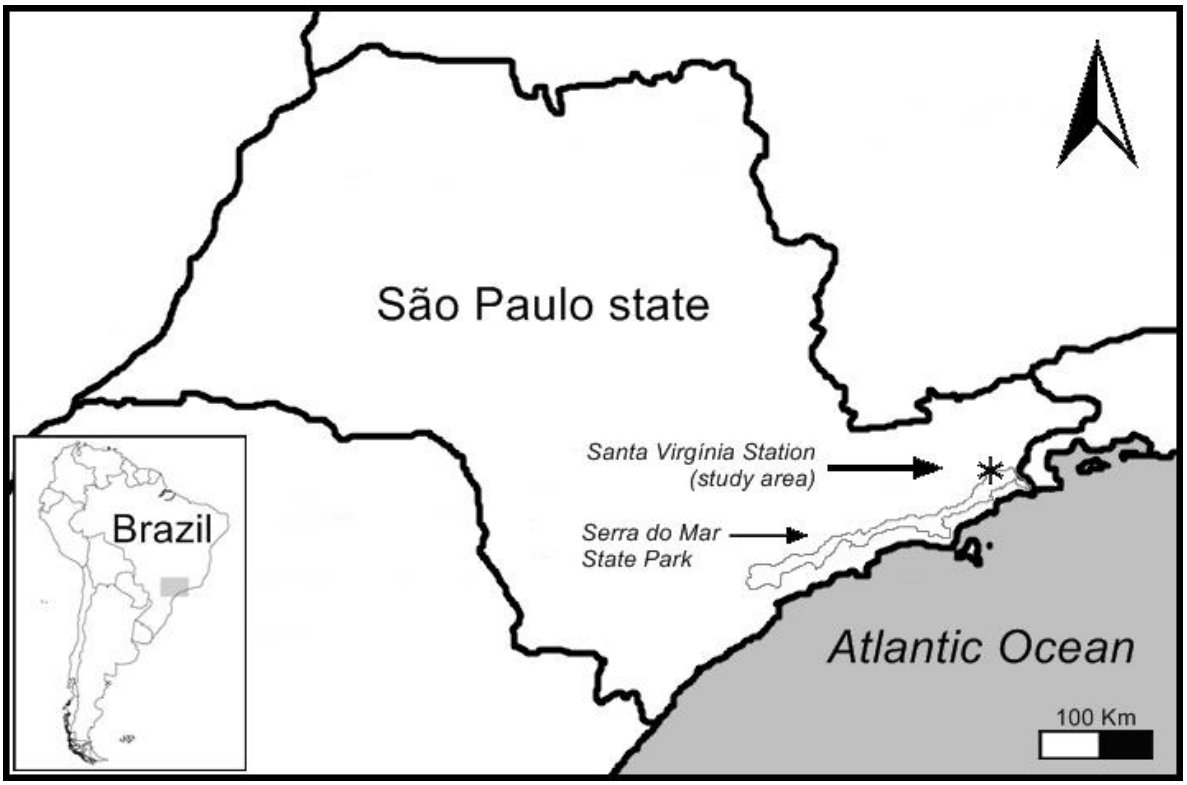
ELECTRONIC SUPPLEMENTARY MATERIAL

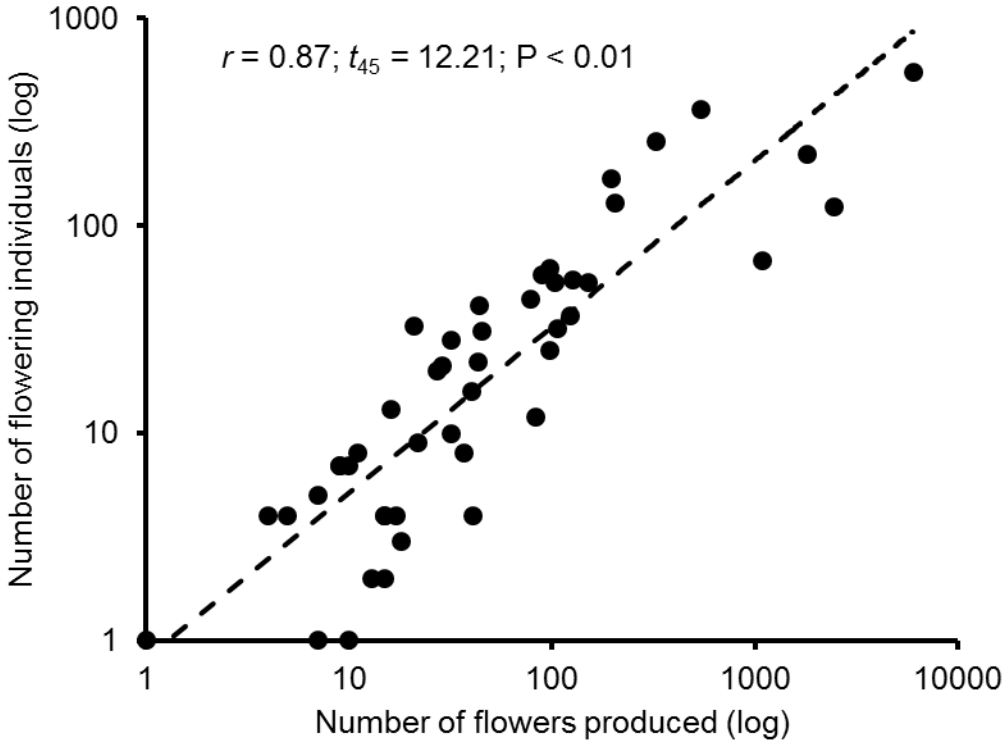
Processes entangling interactions in communities: forbidden links are more important than abundance in a hummingbird-plant network

Jeferson Vizentin-Bugoni, Pietro Kiyoshi Maruyama and Marlies Sazima

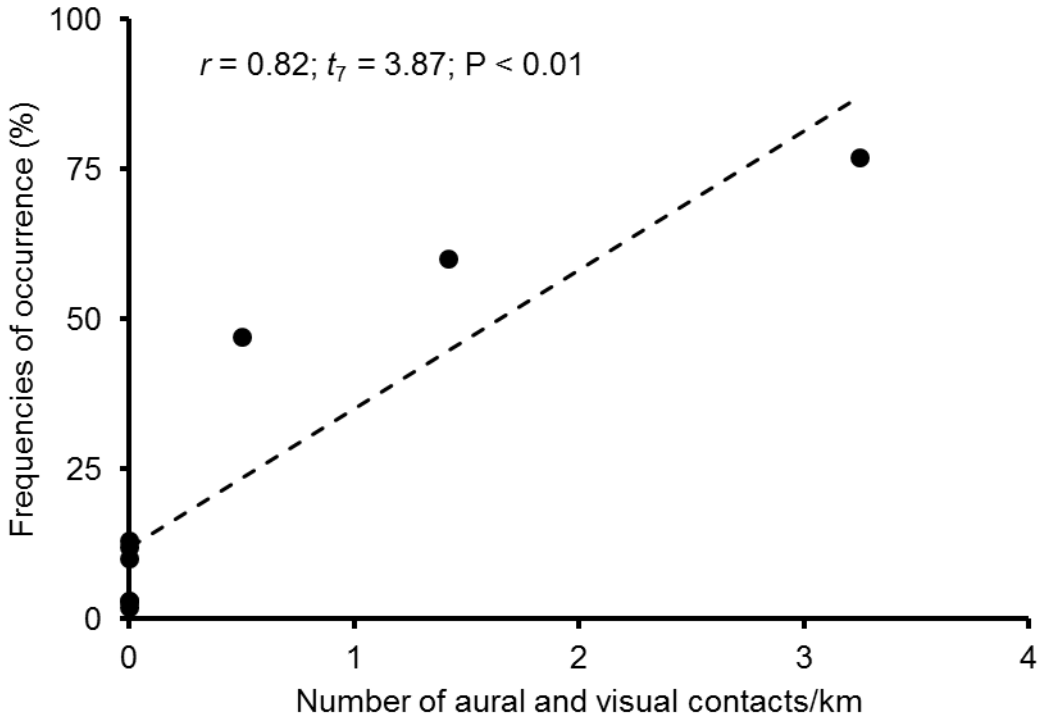
S1. Santa Virgínia Field Station (asterisc) in the Serra do Mar State Park, SE Brazil.



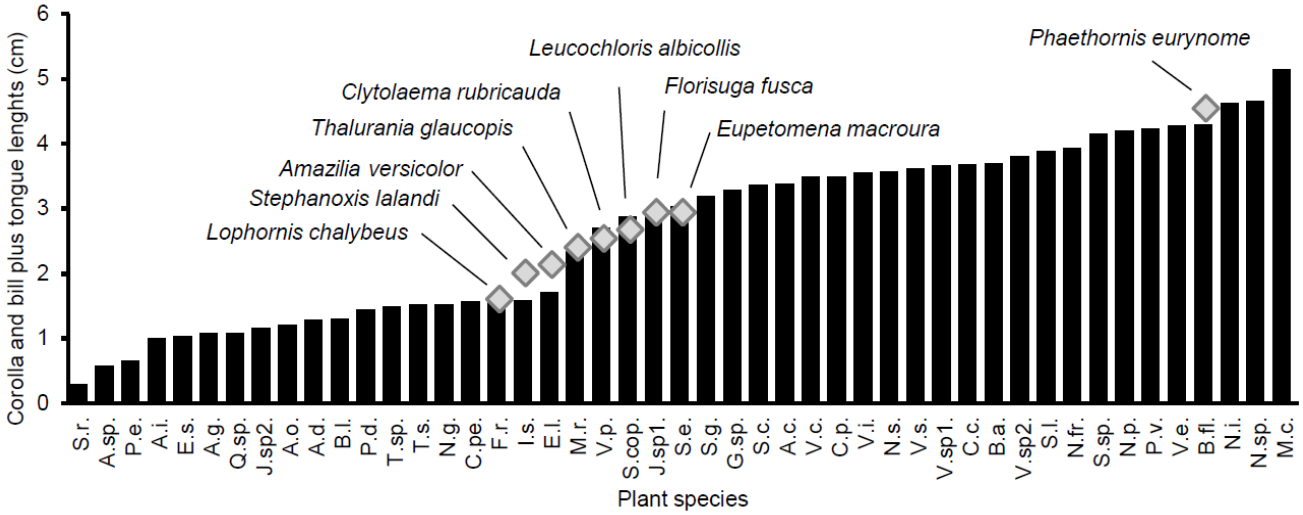
S2. Pearson's correlation between number of flowering individuals and number of flowers (note the logarithm scale) in hummingbird-pollinated plants in Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil.



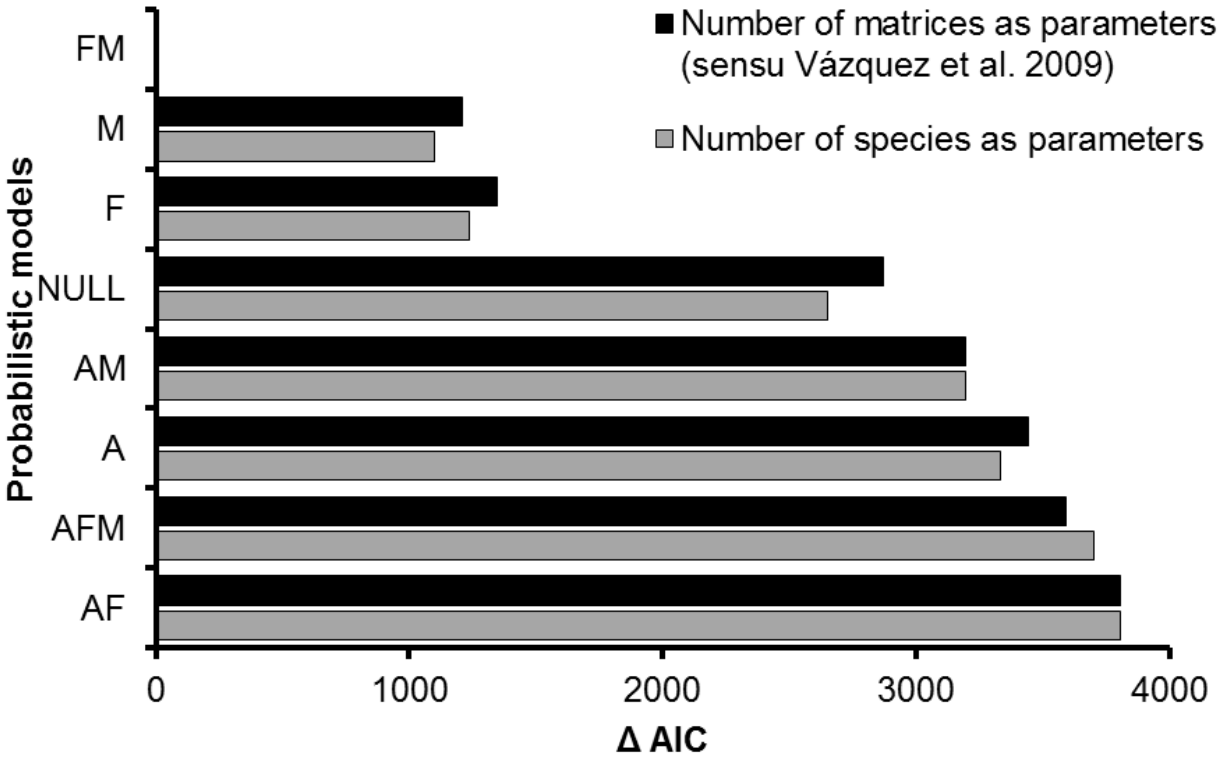
S3. Pearson's correlation between frequency of occurrence and mean number of visual and aural contacts/km with hummingbirds in Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil.



S4. Corolla length of all 47 hummingbird-pollinated species (black bars) and bill plus tongue length for all nine hummingbird species (grey diamonds). These species interacted between September 2011 and August 2012 in the Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Plant scientific names are abbreviated according to Figure 1.

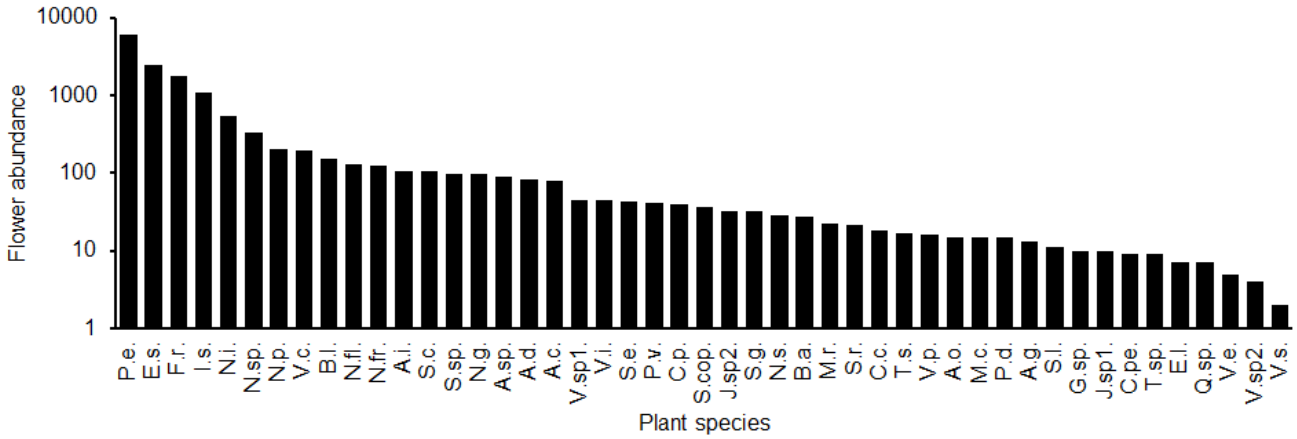


S5. ΔAIC values of the probabilistic models (probabilistic matrices) generated from species abundance (**A**), phenology (**F**) and morphology (**M**) and all possible combinations among them in relation of the best model **FM**. ΔAIC values were calculated using number of matrices (black bars) as in Vázquez et al. (2009) or number of species in each model (grey bars) as parameters; **NULL** is the model in which all pairwise interactions have the same probability. Data from Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Shorter bars indicate better fit of a given model in relation to the model **FM**, which presented the best fit to the observed network. Note that ΔAIC values remain almost the same using different parameters.

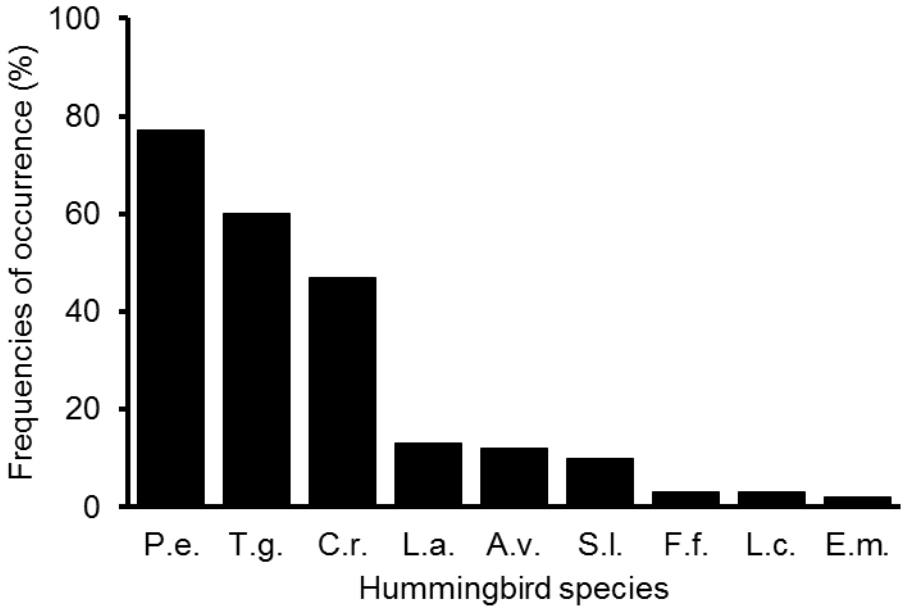


S6. Flowering phenology of hummingbird-pollinated plants in the Atlantic Rainforest in Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Black fills indicate presence of flowers.

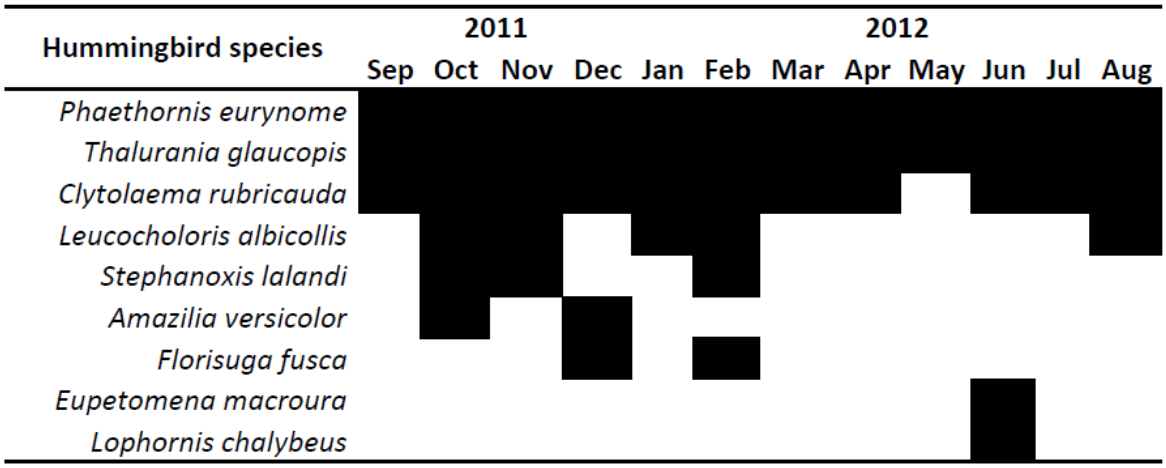
S7. Measures of plant abundance. Number of flowers (logarithmic scale) produced along a year for all 47 hummingbird-pollinated species between September 2011 and August 2012 in the Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Plant scientific names are abbreviated according to Figure 1.



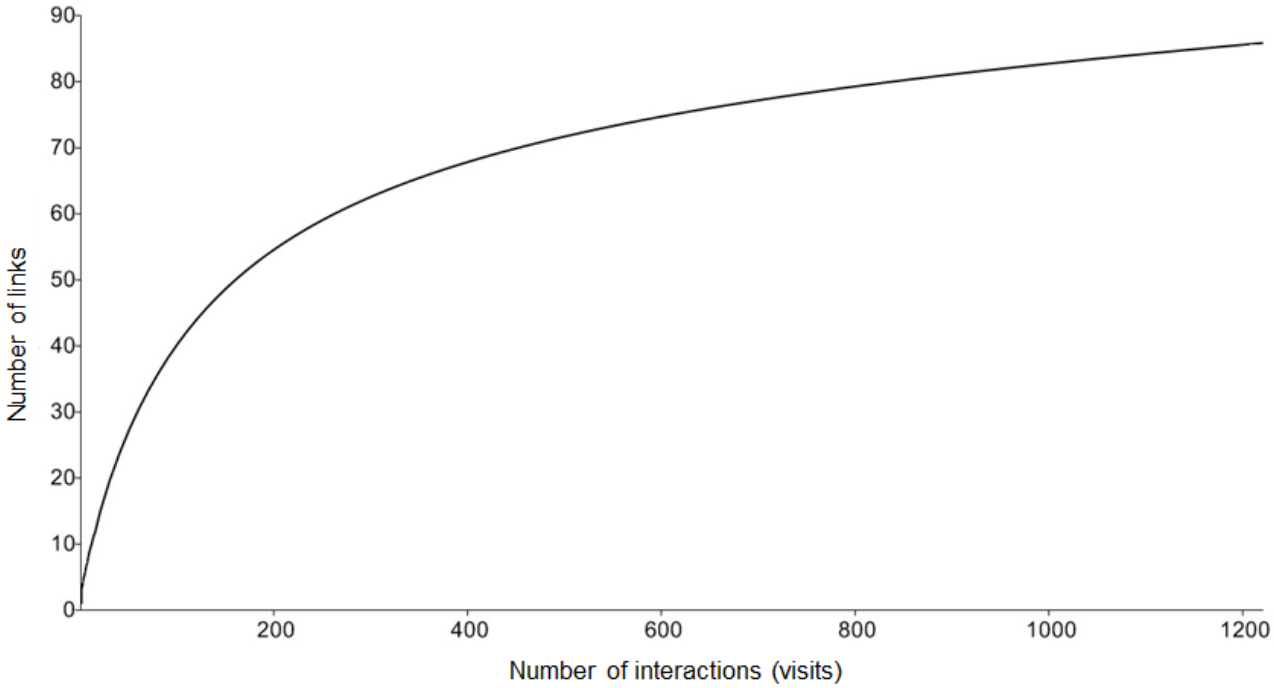
S8. Frequency of occurrence for all nine hummingbird species during 60 days of fieldwork between September 2011 and August 2012 in the Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Hummingbird scientific names are abbreviated according to Figure 1.



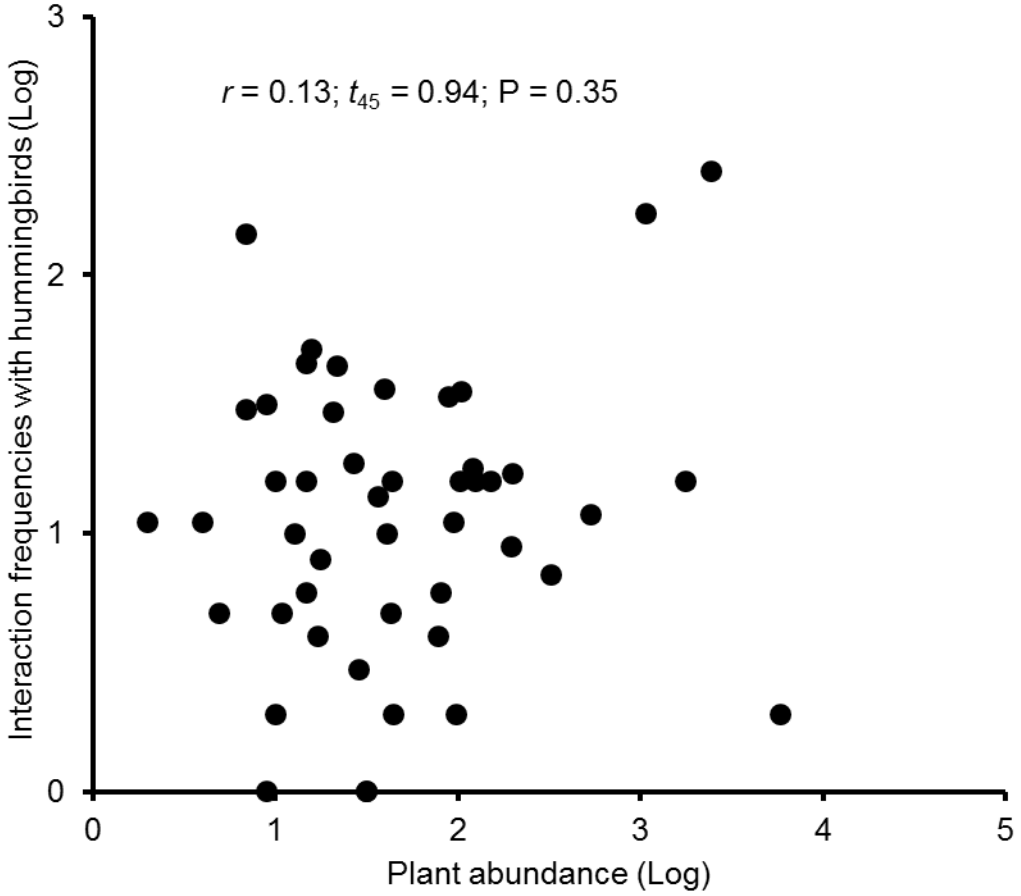
S9. Hummingbird phenology in the Atlantic Rainforest of the Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. Black fills indicate the presence of a given species for each month.



S10. Rarefaction curve for each hummingbird-plant pairwise interactions in relation to the number of visits recorded in the Santa Virgínia Field Station, Serra do Mar State Park, SE Brazil. The curve tends to reach an asymptote, which indicates sampling sufficiency for the interactions in the community.



S11. Pearson's correlation between plant abundance (number of flowers produced by a given plant species along a year) and interaction frequencies (total number of interaction of a given plant with hummingbirds along a year).



S12. Pearson's correlation between hummingbird abundance (proportion of days a given species was recorded in the 60 days of fieldwork) and interaction frequencies (total number of interaction of a given hummingbird species performed with plants along a year).