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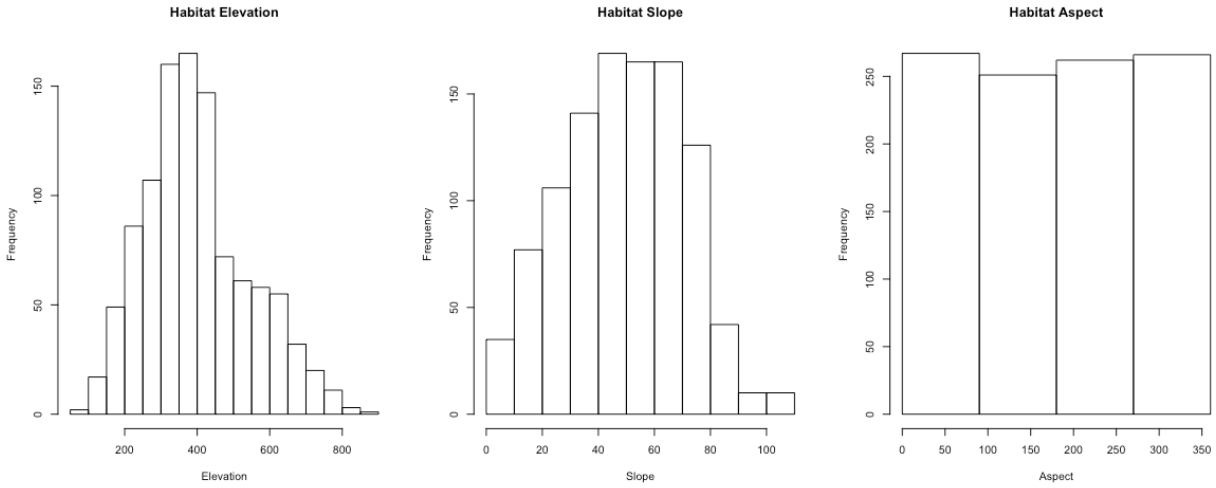
Data exploration and deterministic functions

1.



2. The elevation histogram shows that there are plots that were sampled at low, mid, and high elevations. The greatest number of plots sampled were at a middle or low elevation, while there were less plots sampled at high elevations. There is not quite an even distribution of sampling sites since more sites were sampled at lower elevations than higher ones.

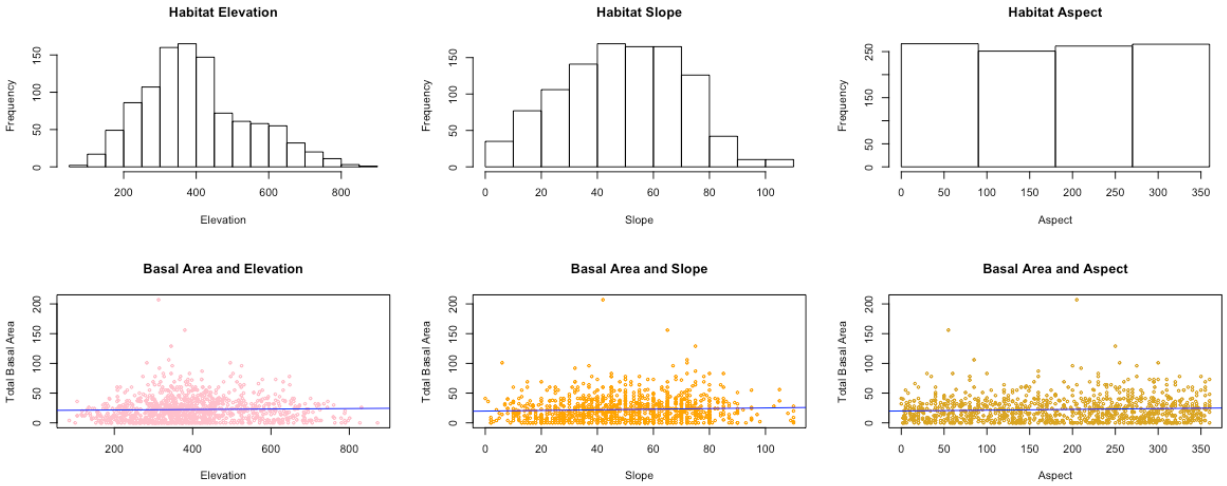
3. The slope was measured as percent slope with values ranging from 0-110.

4. The slope histogram shows the distribution of the percent slope for the plots sampled. The plots include slopes that are flat to very sloped. There is a more even distribution of slopes than in the elevation histogram, with most sites belonging to a middle range of around 50%. Less plots were sampled at very high slopes (>80%) than at flatter slopes (<30%).

5. Aspect is the orientation of a slope. It is typically clockwise and in degrees from 0-360, which is consistent with this dataset.

6. The aspect histogram was uniform with a similar number of sites (~250) sampled at each direction (N, E, W, S). This histogram is the most uniform of the terrain histograms.

7.



8. For each of the terrain variables, there does not seem to be a noticeable association, or a linear association. When comparing elevation, slope, and aspect against total basal area, the data remains relatively flat. A strong relationship would illustrate either a notable increase or decrease in the points and best fit line. A linear regression model may not be the best model fit for the data given the weak association.