Homework 4: EcoStats

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How does the amount of pink flowers at each site affect the number of pika that are visiting?

Since pink flowers in the spring often occur at similar landscapes of high elevation (where pika live) they are highly spatially auto correlated: if you see one pink flower it’s likely you’re going to see many pink flowers.



Phi = 0.4

The high spatial autocorrelation in high elevation means in the spring you are going to see a lot of pink flowers. In the plot each pixel represents a 10 m2 area. Since counting pika is really hard work since you have to sit extremely still for them to even think about coming out to see a pink flower we only choose 15 sites to look for pika. Since in the spring at elevations about 7,000 ft there are lots of pink flowers by chance every plot chosen had flowers in it. Pika really like pink flowers so there was a positive correlation with the number of pink flowers in each area and the number of pika seen. However, there are also many other variables that need to be considered as the data is very scattered.

Next, I looked at Ahamd’s bee data, where the floral diversity is a predictor of the bee population in an area.

True values: Found values:

Presence intercept: 0.5 0.506

Presence slope: 1.3 0.598

Count intercept: 2 2.138

Count Slope: 0.8 0.99