

Historical Archaeology
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Problem Set 1: Seriation at the Clifts Plantation Site

What to do:

1. Download the occurrence seriation dataset from the Clifts Plantation webpage: <http://www.people.virginia.edu/~fn9r/Clifts/index.html>. This contains a data matrix showing which ceramic types are present in which archaeological contexts (pits, cellars, and groups of post holes comprising a single structure). Use Excel to permute the rows and columns of the data matrix to minimize the number of gaps, to fit the occurrence seriation model. As you approach a good solution, count the number of gaps that remain. Make sure that successive solution attempts make that number as low as possible. How low can you go? How good is the fit?
2. Download the frequency seriation dataset. It contains pipestem bore-diameter class frequencies in the same contexts. Use the frequency seriation macro to draw battleship-shaped curves. Permute the “rows” so the curves best approximate the frequency seriation model. How good is the fit? Do you see places where there is lack of fit? What might explain it?
3. Use Excel to make a scatter plot that compares the two seriation orders. Plot the rank order of each assemblage in the occurrence seriation on the x-axis against its rank in the frequency seriation on the y axis. Label each plotted point with the context ID (e.g. "CELLAR 269A-F", using the scatterplot labeling add-in for Excel. What is the pattern you expect to see? How do the actual orders compare? How might you explain the departures you observe?

What to turn in:

A short (< 1 page single spaced) description of your results, along with the completed occurrence seriation, frequency seriation, and scatterplot comparison.