# DNA Clustering:
# Automating Shared Matching

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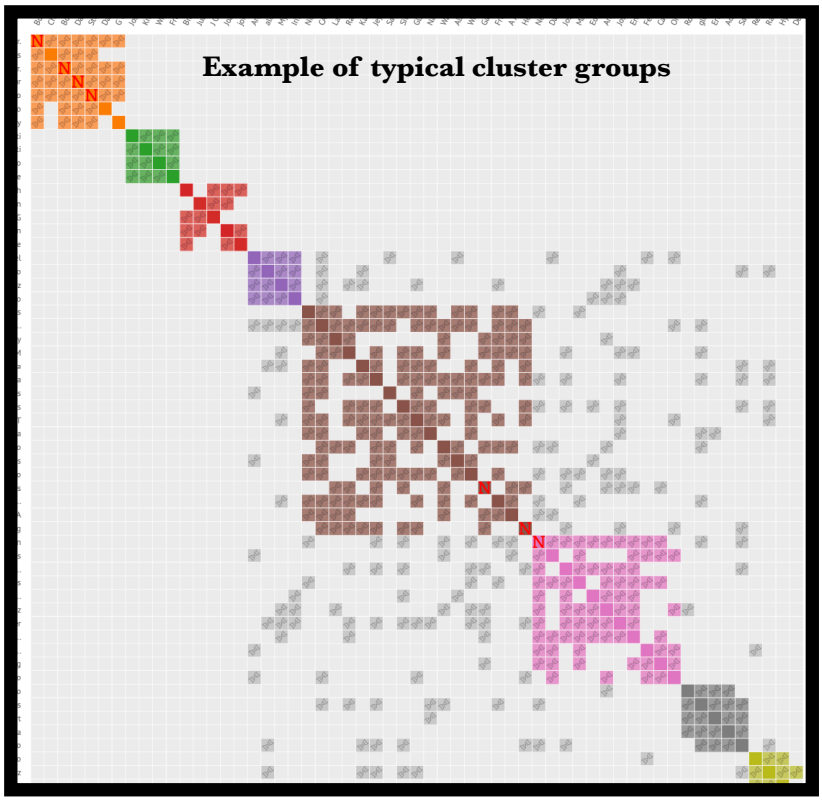
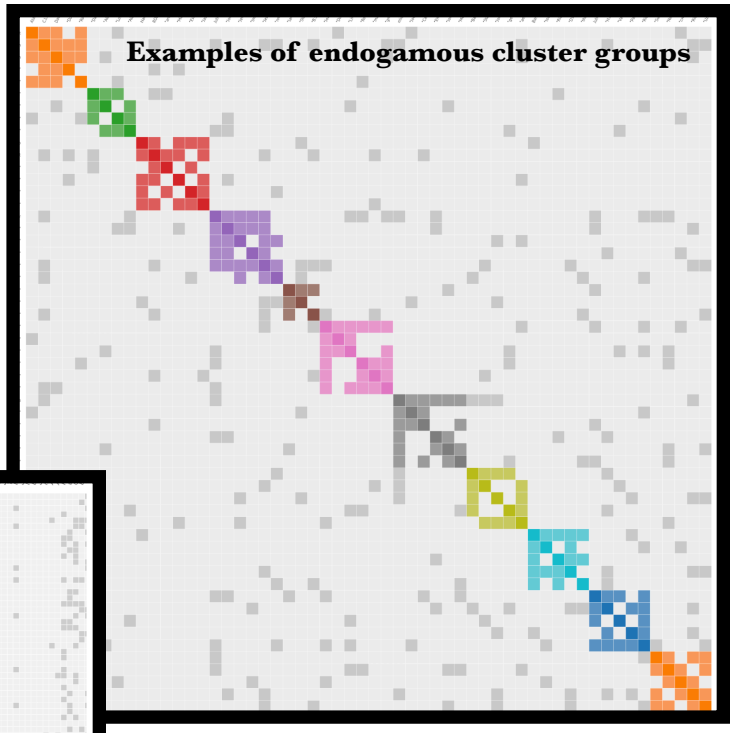
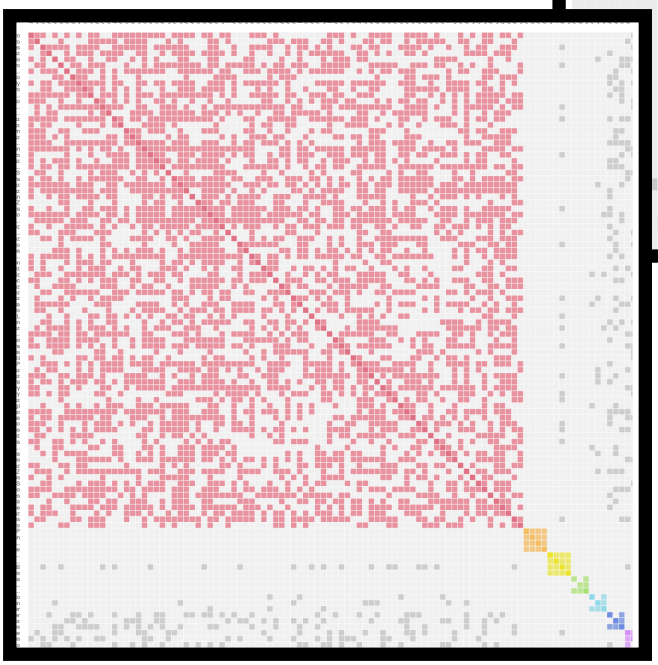
## Auto-Clustering

- Scary sounding term for a very handy tool
- Auto-clustering mechanizes the standard method of analyzing DNA matches
- Special software creates a easy to read chart of our shared matches
- Our matches who match each other are placed into clusters
- Each cluster likely descends from a common ancestor or otherwise has some genetic link
- This data is the same as what is provided from the testing company, but more concise
- Different peoples' clusters will look different depending on their genetic background
- Issues such as pedigree collapse and endogamy can result in less useful clusters
- People who have very distinct ethnic backgrounds will have very clean clusters
- The charts themselves are not so much useful as visually appealing
- However beneath each chart appears a table which shows the match data organized by cluster



- If one or two matches in a cluster have a known genetic connection to the tester, it can be postulated that other unknown marches from that cluster likely share the same genetic connection
- For testers who matches do not fall into neat clusters, it is possible to manipulate the data to reduce false positives by increasing thresholds



•It is also possible to analyze specific shared segments amongst members of cluster in order to look for genetic links

•The techniques of shared matching that all genealogists use have not changed: simply use auto-clusters to look for new leads amongst a sea of matches!

Referenced Websites:

Genetic Affairs: https://geneticaffairs.com/

Shared cM Project: https://thegeneticgenealogist.com/2020/03/27/version-4-0-march-2020-update-to-the-shared-cm-project/

DNA Painter: https://dnapainter.com/tools/sharedcmv4