Further Adventures in Genealogical Bioinformatics: What's New, What's Next?

A presentation for The Genealogical Forum of Oregon — Advanced DNA SIG
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Executive Summary:
The Shared Match Differentiation (SMD) process discussed in my previous GFO talk has additional applications, such as validating cluster matrices, and even managing endogamy. We'll review the background of the differentiation process and proceed to examine these newfound applications of SMD with an eye to their long-term usefulness.

Review & Recap:

- Genealogical Bioinformatics: What is it?
- Shared Match Differentiation (SMD)
  - The Utility of Shared Matches
  - Types of Shared Match Trios
  - The SMD formula
  - Applications of SMD
  - The SMD Utility

What's New:

- Proofreading Cluster Matrices
  - Matrices and SMD
- Endogamic Tailoring (ET)
  - What is Endogamy?
  - Endogamy vs. Pedigree Collapse
  - Ancestry's TIMBER
  - Managing Endogamy in practice
  - SMD's role in Endogamic Tailoring
    - A Shared Match case study
    - Another type of Shared Match Trio
  - Segmental Triangulation (Δ)
    - What is it?
    - Triangulation of Shared Match Trio types
  - Constructing an Endogamic Profile (EP_n)
  - DNA matching and Endogamic Tailoring in practice
  - Effects of Endogamic Tailoring

Instruction and Resources:

- My previous GFO talk:
  https://youtu.be/C0oxLsr4Gbk
- Discovering New Ancestors' Bioinformatics page:
  http://discoveringnewancestors.com/our-services/bioinformatics/
- DNAGEDCOM
  https://dnagedcom.com/
- Dana Leeds: "Ancestry's DNA Clusters: How to Read Them and What Gray Cells Really Mean"
  https://youtu.be/AXZzmULj-o8
- GEDmatch
  https://www.gedmatch.com/
- Ancestry's TIMBER algorithm:
  https://support.ancestry.co.uk/s/article/How-Timber-Helps-You-Find-Meaningful-DNA-Matches
- Genealogical Bioinformatics FaceBook group:
  https://www.facebook.com/groups/1144461196603400