GENETIX

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How to Download Genetix

- Website to download: http://www.univ-montp2.fr/%7Egenetix/genetix/genetix.htm
- The whole program is in French
  - English translation: http://translate.google.com/translate?hl=en&sl=fr&u=http://www.univ-montp2.fr/~genetix/genetix/genetix.htm&prev=/search%3Fq%3DGenetix%26hl%3Den%26lr%3D%26ie%3DUTF-8%26oe%3DUTF-8
- Only PC

What Genetix Can Do

- Nei's D and H
- Wright's F-statistics (the Weir-Cockerham's and Robertson-Hill's estimators)
  - Done through Jacknifing of locus and populations
  - Variabilite/variability- gives all the Fis and Heterozygosity expected and observed and polymorphism
- Linkage Disequilibrium (according to Black and Krafsur)
- Mantel Test
- FCA (Factorial correspondence Analysis)

- It can use FSTAT, GENEPOP (2-allele coded), or text-separated files

FCA

- Correspondences between diploid genotypes and is depicted graphically in 3D and 2D
- Non-parametric→do not need prior
- A population is a cloud of points (individuals) adding to each point contributes inertia to the cloud minimize the space between points
- Graphs can be moved around and zoomed in and out

Inertia

- Each individual is represented by 0 for the absence, 1 for the presence of the allele with the heterozygote state, and 2 for the homozygote state
- Inertia values determine where the dots lay by consistency between themselves in the data
- Website explains all the algorithms and formulas used:
  → www.unesco.org/webworld/idams/advguide/Chapt6_5.htm

FSTAT

- Open Genetix
- Fischier (file)→Importer (import)→open file(can open in Genepop and Fstat format)
- Use convert to change it to Genepop format
- With Weir and Cockerham: press Fstats→ Weir and Cockerham→press OK
- With permutation: same stuff and put amount of permutations