Week 10: Quantitative Genetics

Joe Felsenstein

Genome 562

The Biometricians



Francis Galton (1822-1911)



Ronald Aylmer Fisher (1890-1962)



about 1930



Fisher, R. A. 1918. The correlation between relatives on the supposition of mendelian inheritance. *Philosophical Transactions of the Royal Society of Edinburgh*, **52:** 399 – 433.

A one-locus quantitative character



A two-locus quantitative character



Distributions with different numbers of loci



Each has a number of completely dominant loci (all of equal effect), with size of effects scaled so that overall genetic variance is equal, and with an environmental effect that contributes 20% of the variation.

Regression of offspring on a parent



Regression of offspring on a parent



Regression of effects at one locus on gene dose



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Jay L. Lush (1896-1982)



about 1960

Animal Breeding Plans