Population Genetics with Statistical

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1 Abstract

Population genetics is the subfield of genetics, which deals with genetic differences inside and between population, and is primarily found by Sewall Wright, J. B. S Haldane and Ronald Fisher. Fisher also is describled as "a genius who almost single-handedly created the foundations for modern statical science". So, population genetics has strong relation with statistical. It will be enjoyable to review the work from the devolopment of population genetics and foundation of modern statistical to nowdays. Major fundamental and meaning topics of population genetics and modern statistical are reviewed, escpeically how to modern statical methods are being developed for answering population genetics proplem.

2 The population genetics and statistics before 1919

In 1908, Hardy and Weiberg principle each published papers describing a mathmatical relationship between allele frequencies and genotype frequencies. This relationship, now called the **Hardy-Weinberg principle,** allows us to predict a population's genotype frequencies from its allele frequencies.

It suppose that in a population, a particular gene is segregating two alleles, A and a, and that the frequency of A is p and that of a is q.

3 The 14 years in Rothamsted Experiment Station

Sir Ronald Aylmer Fisher FRS (17 February 1890 -29 July 1962), was a Brithsh statistician and geneticist. In 1919, he began working at the Rothamsted Experimental Station for 14 years, where he analysed its immense data from crop experiments since the 1840s., and developed the anaylsis of variance(ANOVA).

4 References